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**Island County
Solid Waste and Moderate-Risk
Waste Management Plan**

**Preliminary Draft
April 2007**

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**Island County
Solid Waste and Moderate-Risk
Waste Management Plan**

**Preliminary Draft
April 2007**

Prepared for

**Island County, the Cities of Oak Harbor and
Langley, and the Town of Coupeville**

**Prepared by
Green Solutions
South Prairie, Washington**

Contents

1	Summary	1-1
2	Introduction	2-1
2.1	Purpose	2-1
2.2	Planning Area	2-1
2.3	Planning Authority	2-1
2.4	Required Plan Elements	2-2
2.5	Planning Goals and Objectives	2-3
2.6	Roles of Local Government in the Planning Process	2-3
2.7	Public Participation in the Planning Process	2-3
2.8	Disposition of Previous Management Plan Recommendations	2-4
2.9	Summary of New Solid Waste Rules	2-4
3	Background of Planning Area	3-1
3.1	Population	3-1
3.2	Economy	3-1
3.3	Land Use	3-3
3.4	Transportation	3-3
3.5	Environmental Characteristics	3-3
3.6	Siting Land Disposal Facilities in the Planning Area	3-5
4	Waste Generation	4-1
4.1	Municipal Solid Waste	4-1
4.2	Other Special Waste	4-4
4.3	Moderate-Risk Waste	4-6
5	Waste Reduction	5-1
5.1	Existing Program Elements	5-1
5.2	Planning Issues	5-2
5.3	Alternative Waste Reduction Strategies	5-4
5.4	Evaluation of Alternative Waste Reduction Strategies	5-5
6	Recycling	6-1
6.1	Existing Collection Program Elements	6-1
6.2	Designation of Recyclable Materials	6-4
6.3	Planning Issues	6-7
6.4	Alternative Recycling Strategies	6-10
6.5	Evaluation of Alternative Strategies	6-12

Contents (cont'd)

7	Collection	7-1
7.1	Existing Program Elements	7-1
7.2	Planning Issues	7-2
7.3	Alternative Collection Strategies	7-4
7.4	Evaluation of Alternative Strategies	7-6
8	Transfer	8-1
8.1	Existing Program Elements	8-1
8.2	Planning Issues	8-3
8.3	Alternative Transfer Strategies	8-5
8.4	Evaluation of Alternative Strategies	8-8
9	Transport and Disposal	9-1
9.1	Existing Program Elements	9-1
9.2	Planning Issues	9-2
9.3	Alternative Transport and Disposal Alternatives	9-4
9.4	Evaluation of Alternatives	9-6
10	Moderate-Risk Waste	10-1
10.1	Hazardous Waste Regulation	10-1
10.2	Existing Moderate-Risk Waste Management Practices	10-3
10.3	Planning Issues	10-5
10.4	Alternative Management Strategies	10-6
10.5	Evaluation of Alternative Strategies	10-8
11	Other Solid Waste	11-1
11.1	Existing Management Practices	11-1
11.2	Planning Issues	11-4
11.3	Alternative Management Strategies	11-6
11.4	Evaluation of Alternative Strategies	11-9
12	Administration	12-1
12.1	Existing Program Elements	12-1
12.2	Planning Issues	12-4
12.3	Alternative Administrative Strategies	12-5
12.4	Evaluation of Alternative Strategies	12-6

Contents (cont'd)

13	Regulation	13-1
13.1	Existing Program Elements	13-1
13.2	Planning Issues	13-1
13.3	Alternative Regulatory Strategies	13-5
13.4	Evaluation of Alternative Strategies	13-6
14	Recommended Management Strategies	14-1
14.1	Waste Reduction	14-1
14.2	Recycling	14-2
14.3	Collection	14-2
14.4	Transfer	14-3
14.5	Transport and Disposal	14-3
14.6	Moderate-Risk Waste	14-4
14.7	Other Special Waste	14-5
14.8	Administration	14-5
14.9	Regulation	14-6
14.10	Six-Year Implementation Schedule	14-6
14.11	Implementation Responsibilities	14-8
14.12	Funding Strategy	14-9
14.13	Procurement Strategy	14-9
14.14	Twenty-Year Solid Waste Management Strategies	14-10
14.15	Procedures for Amending the Plan	14-11
Appendix A	Environmental Checklist	A-1
Appendix B	Cost Assessment Questionnaire	B-1
Appendix C	Interlocal Agreements for Solid Waste Management Planning	C-1
Appendix D	Resolutions of Adoption	D-1

Tables

1-1	Summary of Recommendations	1-1
2-1	Summary of Previous Solid and Moderate-Risk Waste Management Plan Recommendations	2-5
3-1	Population Levels in Island County	3-1
3-2	Historical and Projected Population for Island County	3-2
3-3	Employment Levels for Island County	3-2
3-4	Regulatory Definitions for Land Disposal Facilities	3-6
4-1	Recent Municipal Solid Waste Generation in the Planning Area	4-1
4-2	Municipal Solid Waste Generation Projections	4-2
4-3	Municipal Solid Waste Disposal Projections	4-2
4-4	Composition of Municipal Solid Waste Disposed in Island County	4-3
4-5	Characteristics of Hazardous Wastes	4-6
4-6	Hazardous Household Substances List	4-7
4-7	Recent Moderate-Risk Waste Generation in the Planning Area	4-8
4-8	Participation in Moderate-Risk Waste Program at the Four Solid Waste Facilities	4-8
4-9	Moderate-Risk Waste Quantity Planning Projections	4-9
4-10	Composition of Moderate-Risk Waste Disposed in the Planning Area in 2005	4-9
5-1	Summary Comparison of Alternative Waste Reduction Strategies	5-7
6-1	Drop-Off and Buy-Back Centers in Island County	6-1
6-2	Summary of Materials Accepted at Drop-Off and Buy-Back Centers in Island County	6-2
6-3	Materials Collected in the City of Oak Harbor Curbside Recycling Program	6-3
6-4	Market Prices for Secondary Materials in July 2006 at Skagit Steel and Recycling	6-5
6-5	Rating of Recyclable Materials	6-5
6-6	Designated Recyclable Materials	6-6
6-7	Summary Comparison of Alternative Recycling Strategies	6-13
7-1	Waste Collection Service Providers in Island County	7-1
7-2	Garbage Collection Fees for 2006	7-2
7-3	Summary Rating of the Alternative Collection Strategies	7-7
8-1	Current Island County Solid Waste and Septage Fees	8-1
8-2	Municipal Solid Waste Quantities Received at Transfer and Drop Box Stations in 2005	8-3

Tables (cont'd)

8-3	Number of Arriving Vehicles and Unloading Positions at Island County Transfer and Drop Box Stations	8-4
8-4	Municipal Solid Waste Storage Capacities at Island County Transfer and Drop Box Stations	8-4
8-5	Concept-Level Capital Cost Estimate for a New Camano Island Transfer Station	8-7
8-6	Summary Comparison of Alternative Transfer Strategies	8-10
9-1	Closed Municipal Solid Waste Disposal Facilities	9-1
10-1	Summary of Customer Participation in Moderate-Risk Waste Collection Program	10-6
10-2	Concept-Level Annual Operating Cost Estimate for Moderate-Risk Waste Alternative B-Education and Technical Assistance for Small Quantity Generators	10-7
10-3	Concept-Level Annual Operating Cost Estimate for Moderate-Risk Waste Alternative D-Regulatory Emphasis	10-8
10-4	Summary Comparison of Alternative Moderate-Risk Waste Management Strategies	10-10
11-1	Concept-Level Annual Operating Cost Estimate for Other Solid Waste Alternative A-Diversion Options for Demolition Wastes	11-6
11-2	Characteristics of Alternative Disaster Debris Storage and Staging Sites	11-8
11-3	Management Recommendations for Disaster Debris	11-8
12-1	Summary Comparison of Alternative Administrative Strategies	12-6
13-1	Active Solid Waste Permits Issued by Island County Public Health.....	13-2
13-2	Summary of Solid Waste Related Complaints in 2004 through 2006	13-4
13-3	Summary Comparison of Alternative Regulatory Strategies	13-7
14-1	Concept-Level Cost Estimate for the Recommended Waste Reduction Strategies	14-1
14-2	Concept-Level Cost Estimate for the Recommended Recycling Strategies ..	14-2
14-3	Concept-Level Cost Estimate for the Recommended Transfer Strategies	14-3
14-4	Designated Disposal Facilities for Solid Waste Generated in the Planning Area	14-4
14-5	Concept-Level Cost Estimate for the Recommended Moderate-Risk Waste Management Strategies	14-5
14-6	Concept-Level Cost Estimate for the Recommended Regulatory Strategies ..	14-6
14-7	Implementation Schedule for Recommended Strategies	14-7
14-8	Implementation Responsibilities	14-8
14-9	Recommended Funding Sources for Solid Waste Programs	14-9

Figures

8-1	Municipal Solid Waste Disposal Sites	8-2
11-1	Potential Staging Sites for Disaster Debris	11-7
12-1	Island County Solid Waste Program Organization	12-3

Preface

This document was developed with the guidance of the Island County Solid Waste Advisory Committee whose participation is gratefully acknowledged. Committee members and their affiliation are identified below.

Island County Solid Waste Advisory Committee

Member	Affiliation
Dave Bonvouloir, Chairman	Island County Solid Waste Division
Rick Hill	City of Langley
Malcolm Bishop	Town of Coupeville
Patrick Carlisle	Member-at- Large
Rick Blank	Member-at-Large
Bill Byrd	Island County Board of Commissioners
Marie Piper	Island County Public Health
Martha Olsen	Member-at-Large
Steve Bebee	City of Oak Harbor
Janet Hall	Member-at-Large
Don Souza	Island Disposal, Inc.
Larry Willis	Waste Management

Special thanks to the members who served on the subcommittee that reviewed the initial revisions to the previous plan: Steve Bebee, Rick Blank, Patrick Carlisle, Janet Hall, Anna Lewis (Ecology), Jerry Mingo and Dave Bonvouloir.

Section 1 Summary

This plan provides recommended strategies for managing solid waste generated in Island County, the Cities of Oak Harbor and Langley and the Town of Coupeville. Recommendations are provided for municipal solid waste, other special waste and moderate-risk waste.

A summary of the recommended strategies is presented in Table 1-1. The recommendations are estimated to cost Island County \$1.9 million over the next six years.

Table 1-1
Summary of Recommendations
(2006 dollars in thousands)

Program Element	Recommendations	Six-Year Cost Estimate
Waste Reduction	Adult Education and Promotion	330
	Youth Education	108
	Financial Support for Reuse Organizations	72
Recycling	Investigate Curbside Recycling	--
	Promote Private Yard Waste Diversion	--
	Investigate Single-Stream Recycling for Whidbey Island	--
	Investigate Local Markets for Glass	--
	Investigate Local Markets for other Materials	--
	Continue to Pursue Co-Generation Options for Wood Waste	--
	Create Off-Site Recycling Area at Camano Transfer Station	100
	Investigate Food Waste Composting	--
Collection	Promotion of Curbside Waste Collection Services	--
	Investigate Alternative Waste Collection Methods	--
Transfer	Upgrade the Oak Harbor Drop Box Station	75
	Upgrade Compactor and Storage Capacity at the Island County Solid Waste Complex and Camano Transfer Station	870
	Increase Capacity at the Bayview Drop Box Station	75
	Continue to Explore and Develop Increased Efficiencies at Camano	--
	Start Planning for a New Transfer Station for Camano Island	--
	Increase or Modify Rates to Ensure Self-Sustaining Programs	--
	Purchase Additional Buffer Areas	--
Treatment and Disposal	Investigate Development of Additional Monitoring Wells	--
	Investigate Additional Methods for Densifying Wastes	--
Moderate-Risk Waste	Public Education for Household Hazardous Waste	60
	Education and Technical Assistance for Small Quantity Generators	60
Other Special Waste	Investigate Diversion Options for Demolition Debris	--
	Adopt Contingency Plan for Disaster Debris	--
	Alternative Collection Programs for Special Wastes	--
Administration	Maintain Target Balance for Working Capital	--
	Solid Waste Operational Assessment and Benchmarking Study	50
Regulations	Discourage Illegal Dumping and Littering	60
	Promote and Enforce Secure Load Requirements	42
Total Estimated Six-Year Cost of Management Recommendations		1,902

The estimated costs shown in Table 1-1 are only for new or additional activities that are specifically addressed in this plan, and do not include the significant expenditures for the existing activities conducted by public agencies and private companies involved in Island County's solid waste system. In addition, recommendations such as implementing curbside recycling services may lead to significant additional costs for residents and others in the county.

Section 2

Introduction

Solid waste is divided into categories based on regulatory requirements and handling methods. In this plan, solid waste is divided into three categories: municipal solid waste, special waste and moderate-risk waste.

Municipal solid waste is the largest category of solid waste. It includes all garbage and recyclable materials that residents, businesses and institutions set out for collection or deliver to a waste receiving station.

The special waste category includes discarded materials that are often managed separately from municipal solid waste. Septage, demolition debris, land clearing waste, biomedical waste, appliances, tires and inert waste are examples of special waste materials.

Finally, moderate-risk wastes are hazardous wastes produced by households and businesses in small quantities. Examples of household hazardous waste include paints, solvents, pesticides, cleaners, adhesives, and used motor oil. Examples of businesses that generate moderate-risk waste include dry cleaners, auto repair shops, hospitals, dental service providers, printers and furniture repair shops.

2.1 Purpose

Washington State law assigns primary responsibility for managing solid waste and moderate-risk waste to local governments. Local governments are specifically required to maintain current solid waste management plans. The purpose of this plan is to develop recommended management strategies for solid waste and moderate-risk waste for the period 2007 through 2012, or longer if the plan continues to provide relevant guidance past 2012.

2.2 Planning Area

The planning area includes all incorporated and unincorporated areas of Whidbey and Camano Islands with the exception of Naval Air Station Whidbey Island, although the Naval Air Station may participate through a cooperative agreement. Unless noted otherwise, in this document “Island County” refers to all areas under the jurisdiction of Island County, the Cities of Oak Harbor and Langley, and the Town of Coupeville.

2.3 Planning Authority

This plan is intended to satisfy the participating jurisdictions’ responsibilities for maintaining a current solid waste management plan in accordance with Chapter 70.95 of the Revised Code of Washington (RCW), and to provide a local hazardous waste management plan in accordance with Chapter 70.105 RCW.

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

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

The Cities of Oak Harbor and Langley and the Town of Coupeville executed interlocal agreements with Island County regarding solid waste management in December 1991. The 21-year agreements authorize Island County to prepare a countywide solid waste management plan that includes the three municipalities.

2.4 Required Plan Elements

RCW 70.95.090 establishes requirements for local solid waste management plans. Local plans are required to include the following elements:

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

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

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

2.5 Planning Goals and Objectives

The goal of the planning process is to develop and maintain a solid waste management system that protects public health and the environment in a cost-effective manner. The specific objectives of this solid and moderate-risk waste management plan are to:

- Ensure convenient and reliable services for managing solid waste materials;
- Promote the use of innovative and economical waste handling methods;
- Encourage public-private partnerships for waste reduction and recycling programs;
- Emphasize waste reduction as a fundamental management strategy;
- Encourage the recovery of marketable resources from solid waste;
- Assist the State achieve its goal of a 50 percent recycling rate;
- Assist the State achieve its goal of an 80 percent used motor oil reuse and re-refining rate;
- Ensure compliance with state and local solid and moderate-risk waste regulations;
- Encourage those who sell and use products containing hazardous ingredients to accept responsibility for minimizing risks to public health and the environment;
- Provide customers information and education to promote recommended waste management practices; and
- Support the State's Beyond Waste goals, especially for the five key initiatives:
 - increased diversion of organic materials,
 - increased use of green building methods,
 - improved management of small-volume hazardous wastes,
 - improved management of industrial wastes, and
 - measuring progress.

2.6 Roles of Local Government in the Planning Process

The Island County Public Works Department has the lead responsibility for amending this plan. The Cities of Oak Harbor and Langley and the Town of Coupeville participated in its development through membership on the Island County Solid Waste Advisory Committee. The municipalities are also responsible for conducting public hearings and adopting the revised plan after it has gone through a public review process.

2.7 Public Participation in the Planning Process

Public participation in the planning process centered on the Island County Solid Waste Advisory Committee (SWAC). Members of the committee are identified in the Preface. The SWAC met on May 19, 2006 to discuss the process for updating the plan. A subcommittee made up of six members met on June 23, July 28, August 25, and October 27, 2006 to review and discuss draft sections of the plan. The full committee met again on December 8, 2006 to review and discuss comments regarding the revised plan. Prior notices of all meetings were published in the Whidbey News Times, the South Whidbey Record and the Stanwood-Camano News.

The Board of Island County Commissioners appoints SWAC members. Members are selected to represent a balance of interests including citizens, public interest groups, business, the waste management industry and local elected public officials. The SWAC meets as issues require it.

The SWAC assists in the development of programs and policies concerning solid waste handling and disposal. It reviews and comments upon proposed rules, policies and ordinances prior to their adoption.

The legislative bodies of Island County and the participating municipalities are responsible for conducting public hearings adopting the draft final plan. Resolutions of adoption executed by the participating jurisdictions will be included in Appendix D.

2.8 Disposition of Previous Management Plan Recommendations

This document supersedes the Island County Solid Waste and Moderate-Risk Waste Management Plan dated December 2000. Management recommendations included in the previous plan are shown in Table 2-1, and the current status of each recommendation is characterized as ongoing or completed (or both).

2.9 Summary of New Solid Waste Rules

Several new rules have been adopted since the previous solid and moderate-risk waste plan was developed. Several of the more important new rules and regulations are shown below (not in order of priority).

2.9.1 Solid Waste Handling Standards

A new rule governing solid waste facilities and handling practices, Chapter 173-350 of the Washington Administrative Code (WAC), went into effect February 10, 2003. This rule replaces Ch. 173-304 WAC. Ch. 173-350 WAC requires permitting for solid waste handling facilities for recycling, composting, MRW, and tires (unless exempted by definition or due to beneficial use). Landfilling of MSW is still regulated by a different rule (Ch. 173-351), but Ch. 173-350 WAC created a new category called “inert wastes” and established requirements for landfilling it. The new rule also places more importance on local solid waste management plans (such as this document) by requiring all solid waste handling facilities (whether exempt or requiring a permit) to conform with local solid waste plans. Ch. 173-350 also states a facility’s exemption for handling only recyclable materials is contingent on meeting the definition of a recyclable material as designated in a local solid waste management plan.

2.9.2 State Beyond Waste plan

After several years of development, the Washington Department of Ecology released the combined statewide solid and hazardous waste management plan in November 2004. Commonly referred to as the “Beyond Waste plan,” this 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 20-30 years or more. In the short term (over the next five years), the Beyond Waste plan focuses on five areas: industrial waste, small volume hazardous waste, organic materials, green building, and measuring progress.

Table 2-1
Summary of Previous Solid and Moderate-Risk Waste
Management Plan Recommendations ¹

	Status, May 2006	
	Ongoing	Completed
<i>Waste Reduction</i>		
Economic Incentives for Reuse Organizations	*	
Resource Guide for Reusable Household Products		*
Youth Classroom Education Program	*	*
Education Outreach Program	*	
<i>Recycling</i>		
Expansion of Recycling Area at Bayview		*
<i>Collection</i>		
Promotion of Curbside Collection Services	*	*
<i>Transfer</i>		
Increase Emergency Storage Capacity of Coupeville		*
Increase Unloading and Storage Capacity at Bayview	*	*
Increase Unloading and Storage Capacity at Camano	*	
Improve Access and Receiving Capacity at Coupeville	*	*
<i>Treatment and Disposal</i>		
Designate 4 Biosolids Disposal Sites	*	*
Purchase Additional Buffer Areas for Coupeville Landfill		*
Develop 3 New Monitoring Wells		* ²
<i>Other Special Waste</i>		
Establish Contingent Disposal Strategy for Demolition Waste	*	*
Establish Contingent Staging Locations for Disaster Debris		*
Establish Management Recommendations for Disaster Debris		*
<i>Moderate-Risk Waste</i>		
Public Education for Household Hazardous Waste	*	*
Education and Technical Assistance for Small Quantity Generators	*	
<i>Administration</i>		
Increase Minimum Level of Service at Receiving Facilities	*	*
Revise Target Balance for Working Capital	*	
Remodel Administration Offices	*	
<i>Regulation</i>		
Prevention Campaign for Illegal Dumping and Littering	*	
New Uniform Enforcement Procedure	*	

- Notes:
1. Items shown as both ongoing and completed are activities where the original recommendation has been fulfilled but ongoing activities are being conducted.
 2. Twelve monitoring wells have been installed at Coupeville and three at Freeland.

2.9.3 Ban on Improper Disposal of Electronic Waste (“E-Waste”)

On March 24, 2006, Governor Gregoire signed a law that requires the establishment of a system to recycle electronic wastes, including computers, monitors and televisions. This system will be available at no charge to consumers, and will be financed by manufacturers of the electronic equipment. Rules are still being worked out to implement this law. The new system will become effective on January 1, 2009.

2.9.4 Revenue-Sharing Agreements

A recent addition to state law (RCW 81.77.185) allows waste collection companies to retain up to 30 percent of the market revenues they receive for recyclables collected in the certificate areas. This new provision was adopted to encourage further investments in recycling and to provide motivation for increased recycling, whereas previously all market revenues were required to be used to offset expenses in the calculation of permissible rates and so certificate haulers had less incentive to maximize recycling. To implement this system, a proposal must be developed by the collection company and county, then submitted to the Washington Utilities and Transportation Commission (UTC) for approval. The county must certify that the proposal is consistent with their solid waste management plan. The proposal must demonstrate how the retained revenues will be used to increase recycling. As of early 2006, only a few of these agreements have been approved and only in more populated areas with larger waste streams and larger amounts of recyclables (King, Pierce and Snohomish Counties).

2.9.5 Tire Fee Reinstated

RCW 70.95 was recently amended to reinstate the tire fee, effective July 1, 2005. The original tire fee, which had expired in 1994, had been used to clean up tire dumps, fund a special study of tires, and conduct other activities. The new fee is also intended to clean up unauthorized tire dumps and to help prevent future accumulations of tires. The fee is expected to raise \$4.4 million per year and will expire in 2010. Other amendments provide for stricter licensing requirements and make tire transporters (licensed or not) liable for the cost of cleaning up illegally stored or dumped tires. The amendments also directed Ecology to conduct a study of unauthorized tire piles and to clean up a tire dump near Goldendale.

2.9.6 Secure Load Requirements

A new 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. Island County has adopted a local ordinance that reflects the state requirements and requires such fees be collected at the solid waste receiving sites.

2.9.7 Ban on Sale of Mercury-Containing Products

On January 1, 2006, the Mercury Education and Reduction Act (RCW 70.95M) made it illegal to sell most items that contain mercury, including thermometers, manometers, toys, games and jewelry. The sale of thermostats containing mercury will also be illegal unless the manufacturer

provides a thermostat recycling program. The sale of fluorescent light bulbs will continue to be allowed, but labeling must now be used to warn consumers that the bulbs contain mercury.

2.9.8 General Permit for Biosolids Management

A process is underway to revise the rules regarding management of biosolids. The new rules will replace the current rule, Chapter 173-308 WAC adopted in 1998, and are anticipated to:

- Streamline the permitting process;
- Improve septage management requirements;
- Develop a more equitable fee structure; and
- Address various other issues and clarifications.

The rule-making process is expected to be completed in mid-2007.

Section 3

Background of Planning Area

This section presents a summary of the population, economy, land use, transportation, and environmental characteristics of Island County. It also discusses the “fatal flaws” associated with siting land disposal facilities in the planning jurisdiction. Fatal flaws are conditions that may affect, or in some cases prevent, the siting of solid waste facilities.

3.1 Population

The population of Island County has almost tripled over the past 30 years, growing from 27,011 in 1970 to 71,558 persons in 2000. The *Island County Comprehensive Plan* (September 1998) anticipates that the growth rate will be approximately 1.9 percent per year during the period 2000 through 2020. The comprehensive plan also anticipates that the population of the north and central areas of Whidbey Island will grow at a rate somewhat less than south Whidbey and Camano Islands.

Recent historical population data for the cities and areas in Island County are shown in Table 3-1. The population figures shown by city includes the Urban Growth Area (UGA) for that city. Table 3-2 shows historical and projected population estimates for the county for the planning period (through 2025). The figures shown in Table 3-2 for the years after the last census in 2000 are the “intermediate series,” or medium series, of projections by the Washington State Office of Financial Management (OFM).

Table 3-1
Population Levels in Island County

City (UGA)	1990	2000
Coupeville	1,377	1,723
Langley	845	959
Oak Harbor	17,176	19,795
Unincorporated	<u>40,797</u>	<u>49,081</u>
Total	60,195	71,558
Area		
North Whidbey	34,592	34,737
Central Whidbey	8,205	9,467
South Whidbey	10,069	14,007
Camano Island	<u>7,329</u>	<u>13,347</u>
Total	60,195	71,558

Source: from web page for Island County Planning and Community Development.

3.2 Economy

The driving force of the Island County economy is Naval Air Station Whidbey Island (NASWI). The Naval base creates about 10,000 jobs locally, with an annual payroll of \$348 million. Other major industry groups are retail trade and services. Total non-farm employment as of March 2006 is estimated at 16,300 people.

Table 3-2
Historical and Projected Population for Island County

Year	Population
1960	19,368
1970	27,011
1980	44,048
1990	60,195
2000	71,558
2005	76,000
2010	80,650
2015	87,400
2020	94,400
2025	101,100

Source: Washington State Office of Financial Management.

Employment figures for 2002 and 2004 are presented in Table 3-3. Employment projections provided by the Washington State Employment Security Department show that most types of work will remain fairly stable or increase slightly, with the possible exception of jobs in agriculture and wholesale trade. NASWI, trade, service and state and local government together are expected to continue to provide about three-quarters of the employment opportunities through 2025.

Island County is home to a large number of small businesses. Over 90 percent of all businesses have 20 or fewer employees. The solid waste and recycling industry in Island County employs over 95 public and private employees.

Table 3-3
Employment Levels for Island County

Industry Group	Number of Employees	
	2002	2004
Agriculture, Forestry, Fishing and Hunting	134	151
Construction	966	1,061
Manufacturing	604	663
Wholesale and Retail Trade	2,397	2,412
Transportation and Warehousing	71	179
Information	263	278
Finance, Insurance and Real Estate	681	693
Service (private sector)	4,534	5,030
Government		
Federal Civilian	1,461	1,443
State and Local	3,023	3,026
Other	625	89
Military	NA	NA
Totals	14,759+	15,025+

NA = Not Available.

Source: Workforce Explorer, Washington State Employment Security Department.

3.3 Land Use

The *Island County Comprehensive Plan* identifies the optimal use of land in the unincorporated areas of the County. The plan focuses on maintaining the rural character of the County. The urban growth areas associated with Oak Harbor, Coupeville and Langley comprise 5,825 acres or about 4 percent of the total land area. The rural land use designation is the largest at 79,920 acres while the rural agriculture and rural forest designation together amount to 22,715 acres.

Land use policy is implemented through the zoning ordinance (Chapter 17.02 of the Island County Code). The ordinance establishes six land use classifications: rural residential, residential, urban business center, agricultural, forest management, and non-residential. In addition to the land use classifications, overlay designations are used to protect sensitive features and areas such as wetlands, steep and unstable slopes, fish and wildlife habitat, airport and aircraft safety, scenic corridors, water resources, critical drainage areas, and historic resources.

3.4 Transportation

Access to Whidbey Island is via State Highway 20 over Deception Pass from Skagit County, by ferry from Mukilteo in Snohomish County to Clinton on south Whidbey Island, and by ferry from Port Townsend to Keystone on central Whidbey Island. State Highways 20 and 525 are the major north-south surface transportation routes on Whidbey Island.

Access to Camano Island is provided by State Highway 532 from Stanwood in Snohomish County. There is no direct transportation route between Whidbey and Camano Islands.

Neither Whidbey nor Camano Islands are currently served by rail or barge transportation. The state highway and marine ferry system provide the only modes of public surface transportation for the planning area.

3.5 Environmental Characteristics

Whidbey and Camano Islands together have a land area of 206 square miles, with a few additional square miles contributed by the small islands that are included within Island County's boundaries (Ben Ure, Pass, Deception, Smith, Minor and Baby Islands). Whidbey Island is 40 miles long and from 1 to 10 miles wide. Camano Island is about 15 miles long and from 1 to 8 miles wide. Altogether, the two main islands have 200 miles of marine shoreline (see Figure 8.1 in Section 8).

3.5.1 Climate

Island County has a temperate climate with cool, dry summers and mild, moist winters. The mean annual temperature is 50 degrees F. The coolest month, January, averages 38 degrees F and the warmest month, August, averages 61 degrees F.

Precipitation is influenced by the rain shadow effect of the Olympic mountain range, and ranges from about 18 to 42 inches per year.

3.5.2 Geology

Island County lies within the Puget Sound lowland between the Cascade Range on the east and the Olympic Mountains on the west. The islands are generally composed of unconsolidated Pleistocene glacial and interglacial deposits that overlie Tertiary and older bedrock.

The large difference in physical characteristics of the glacial deposits is due to differences in the mode of deposition. Advancing glaciers typically deposited a compact mixture of clay, silt, sand, gravel, and boulders as till. Retreating glaciers typically deposited course-grained sands and gravels.

3.5.3 Soils

The soils of Island County have developed under the influence of a moist marine climate. Most soils have developed under forest vegetation. Soil materials consist of glacial drift that varies considerably in texture, permeability and consistency. As a result, soil profiles are extremely variable throughout the County.

3.5.4 Topography

The relief of Island County is characterized by gently rolling hills except along certain shoreline areas where steep bluffs have been created by glacial rebound and wave action. A majority of the land area lies between 100 and 400 feet above sea level.

Above 200 feet in elevation, the land rolls through upland hills and plains. Gentle ridges run along the elongated reaches of the islands. Fertile valleys, terraces and prairies, rising to about 100 feet above sea level, traverse several portions of Whidbey Island.

3.5.5 Surface Water

The gentle relief and relatively low rainfall conditions produce surface drainage systems that are not well developed. Individual drainage basins are small and generally flow only intermittently. Relatively impervious soil materials create local drainage impoundments forming small lakes, wetlands and lagoons.

Island County has 37 lakes and ponds covering 971 acres and 415 acres of associated marsh and wetlands. Marine waters influence several of the lakes. Flooding occurs in the low-lying coastal areas.

3.5.6 Ground Water

Ground water provides the only source of potable water for all of Whidbey and Camano Islands except for the City of Oak Harbor and Naval Air Station Whidbey Island. The City of Oak Harbor and NASWI bring in potable water by pipeline. In 1982, the U.S. Environmental Protection Agency designated both Whidbey and Camano Islands as sole-source aquifers under the Federal Safe Drinking Water Act (Public Law 93-523).

3.5.7 Marine Water

Most tidally active waters lie off the shoreline of western Whidbey Island. These waters are directly influenced by the Pacific Ocean, the Straits of Juan de Fuca and Admiralty Inlet. Marine waters surrounding the eastern side of Whidbey Island are sheltered and channeled through Saratoga Passage and Deception Pass. Port Susan waters are nearly completely enclosed by Camano Island and the mainland.

The physical terrain associated with surface landforms and sea bottoms primarily affects mixing within these waters. Active tidal waters fluctuating within the deep-water troughs of the Straits of Juan de Fuca and Puget Sound pass over a shallow shelf within Admiralty Inlet. Water currents are rapid at this location.

The narrow channels of Deception Pass on the north and the opening between Whidbey and Camano Island to the south limit movement of water through Saratoga Passage and Skagit Bay. Water flow tends to be rapid at these openings, while circulation and water exchange within the inlet are relatively slow. Small bays within the inlet are further sheltered from these tidal currents. The mixing and exchange of waters within these coves occur primarily by wind action. Fresh water runoff from the Skagit River also flows into these areas and acts to dilute the surface salinity. Many of these areas are estuarian in nature and are extremely productive of various life forms.

The eastern shore of Camano Island abuts the estuarian water of Port Susan. The mouth of the Stillaguamish River empties into the northern, shallow reaches of the inlet. The southern portions of Port Susan are comparatively deep. The inlet, however, is nearly completely enclosed by landforms and two shallow sea bottom shelves which extend off the tip of Camano Island. Marine waters in this area mix only when tides are extreme.

Marine debris presents a continuing problem along all shorelines of Island County. Prevailing winds from the south and west direct the marine debris, including litter, into the coastal areas. It is generally the policy, with certain exceptions, of Island County to waive disposal fees for groups that collect litter.

3.6 Siting Land Disposal Facilities in the Planning Area

Land disposal facilities refer to landfills, land application sites, piles, and surface impoundments. The regulatory definitions for land disposal facilities are shown in Table 3-4.

Chapter 70.95 RCW requires that land disposal facilities be located in areas that are consistent with standards established by the Department of Ecology. Under that legislation, Ecology has developed siting standards for geology, ground water, soil, flooding, surface water, slope, cover material, capacity, climatic factors, land use and toxic air emissions. One of the standards for ground water prohibits the siting of MSW or limited purpose landfills over federally designated sole source aquifers. Both Whidbey and Camano Island have been designated sole source aquifers under the Federal Safe Drinking Water Act (Public Law 93-523). Hence, no new or expanded MSW or limited purpose landfills may be sited in Island County.

Table 3-4
Regulatory Definitions for Land Disposal Facilities^(a)

Disposal Facility	Definition
Municipal Solid Waste Landfill	A disposal facility or part of a facility at which municipal waste is permanently placed in or on land including facilities that use solid waste as a component of fill.
Limited Purpose Landfill	A landfill which is not regulated or permitted by other state or federal environmental regulations that receives solid wastes limited by type or source. Limited purpose landfills include, but are not limited to, landfills that receive segregated industrial solid waste, construction, demolition and land clearing debris, wood waste, ash (other than special incinerator ash) and dredged material.
Inert Waste Landfill	A landfill that receives only inert wastes.
Land Application Site	A contiguous area of land under the same ownership or operational control on which solid wastes are beneficially utilized for their agronomic or soil amending capability.
Pile	Any non-containerized accumulation of solid waste for treatment or storage.
Surface Impoundment	A facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), and which is designed to hold an accumulation of liquids or sludges. The term includes holding, storage, settling, and aeration pits, ponds, or lagoons, but does not include injection wells.

(a) Chapter 173-350-100 Washington Administrative Code.

Section 4

Waste Generation

This section presents waste quantity and composition estimates for solid waste generated in Island County. Solid waste is divided into three categories: municipal solid waste, other special waste and moderate-risk waste. These waste categories are discussed in the sections below.

4.1 Municipal Solid Waste

Municipal solid waste includes rubbish, food waste, trash and all other post-consumer, non-hazardous solid waste generated in private households, offices and commercial business establishments. It also includes institutional and industrial waste that is disposed together with residential and commercial waste. Municipal solid waste is the largest category of solid waste.

4.1.1 Municipal Solid Waste Generation

Waste generation rate refers to the quantity of solid waste materials produced within a stated period of time. Solid waste generation includes materials that are both recycled and disposed.

From 2000 through 2005, municipal solid waste has been generated at rates ranging from 3.1 to 5.1 pounds per capita per day (see Table 4-1). The variation in waste generation rates has been

Table 4-1
Recent Municipal Solid Waste Generation in the Planning Area

Year	Population	Waste Recycled, ton/year	Waste Recycling Rate, lbs/pers/day	Waste Disposed, tons/year	Waste Disposal Rate, lbs/pers/day	Waste Generated, tons/year	Waste Generation Rate, lbs/pers/day
1990	55,400	(a)	(a)	24,200	2.4	24,200	(a)
1991	57,900	(a)	(a)	26,000	2.5	26,000	(a)
1992	60,000	(a)	(a)	24,500	2.2	24,500	(a)
1993	61,700	(a)	(a)	24,700	2.2	24,700	(a)
1994	63,100	(a)	(a)	26,700	2.3	26,700	(a)
1995	64,100	(a)	(a)	26,800	2.3	26,800	(a)
1996	65,500	7,900	0.7	28,000	2.3	35,900	3.0
1997	66,800	9,200	0.8	29,700	2.4	38,900	3.2
1998	67,700	10,400	0.8	31,700	2.6	42,000	3.4
1999	69,629	3,885	0.3	34,574	2.7	38,500	3.0
2000	71,558	3,811	0.3	36,938	2.8	40,700	3.1
2001	72,446	19,602 (b)	1.5	39,458	3.0	59,100	4.5
2002	73,335	(a)	(a)	42,151	3.2	(a)	(a)
2003	74,223	4,346	0.3	47,006	3.5	51,400	3.8
2004	75,112	21,917 (b)	1.6	48,012	3.5	69,900	5.1
2005	76,000	9,215	0.7	51,464	3.7	60,700	4.4

(a) Information not available

(b) Additional recycling tonnages in 2001 and 2004 are from large, one-time shipments.

caused by variations in the recycled amount, which is due to large one-time shipments of scrap metals and other materials. The waste recycling rate has ranged between 0.3 and 1.6 pounds per capita per day in the period from 2000 to 2005. The disposal rate has been more stable but has been increasing, and has ranged between 2.8 and 3.7 pounds per capita per day in the same period. The averages for the period 2000 through 2005 (excluding 2002 due to insufficient data) are 0.9 pounds per person per day for recycling, 3.3 pounds for waste disposal and 4.2 pounds for total waste generated.

4.1.2 Municipal Solid Waste Planning Projections

The projection for future municipal solid waste generation shown in Table 4-2 is based on the 2005 per capita recycling and disposal figures (from Table 4-1) and the population projections shown in Table 3-2.

Table 4-2 Municipal Solid Waste Generation Projections (tons/day)			
	Current (2005)	2015	2025
Population	76,000	87,400	101,100
Waste Recycled	25	29	34
Waste Disposed	141	162	188
Waste Generated	166	191	221

Municipal solid waste generation varies with time. Waste generation typically peaks in the summer months and is at a minimum in the winter months. In 2005, the peak day occurred on December 30 and the largest amount received for any 7-day period occurred for the week beginning August 22. Projected municipal solid waste disposal rates for the annual average day, the peak week and the peak day are compared in Table 4-3.

Table 4-3 Municipal Solid Waste Disposal Projections			
	Year		
	2005	2015	2025
Annual Average, tons per day	141	162	188
Peak Week, tons per week	1,157	1,330	1,540
Peak Day, tons per day	241	277	320

4.1.3 Municipal Solid Waste Composition

For planning purposes, composition data developed for Washington State can be used together with the waste disposal rates identified in Table 4-2 to provide estimates for the amount of materials disposed in Island County. The composition projection is presented in Table 4-4.

Table 4-4
Composition of Municipal Solid Waste Disposed in Island County

Category	Material	Percentage of Waste Disposed	Projected Quantity of Waste Disposed in Island County, tons per year		
			2005	2015	2025
Paper	Newspaper	2.8			
	Cardboard	5.2			
	Other Groundwood	0.4			
	High-Grade	1.5			
	Magazines	1.5			
	Mixed/Low-Grade	4.7			
	Compostable	5.8			
	Remainder/Composite	<u>1.8</u>			
	Total Paper	23.7	12,200	14,030	16,200
Plastic	PET Containers (#1)	0.5			
	HDPE Containers (#2)	0.6			
	Polystyrene (#6)	0.6			
	Film and Bags	4.9			
	Bottle Types 3-7	0.3			
	Other Plastic Pkg.	1.3			
	Other Products	2.5			
	Remainder/Composite	<u>0.9</u>			
	Total Plastics	11.6	6,000	6,870	7,900
Glass	Clear Glass Containers	1.7			
	Green Glass Containers	0.4			
	Brown Glass Containers	0.7			
	Non-Glass Ceramics	0.4			
	Remainder/Composite	<u>0.8</u>			
	Total Glass	4.0	2,100	2,400	2,700
Ferrous Metals	Tin Cans	1.1			
	Mixed Metal & Other	2.4			
	White/Brown Goods	0.4			
	Other Ferrous Metals	<u>2.6</u>			
	Total Ferrous Metals	6.5	3,300	3,800	4,400
Non-Ferrous Metals	Aluminum Cans	0.5			
	Other Aluminum	0.3			
	Other Non-Ferrous Metals	<u>0.2</u>			
	Total Non-Ferrous Metals	1.0	500	600	700
Organics	Food	15.7			
	Yard Wastes	4.7			
	Manures	1.2			
	Disposable Diapers	2.5			
	Other Organics	<u>0.9</u>			
	Total Organics	25.1	12,900	14,900	17,200
Consumer Products	Computers	0.14			
	Other Electronics	0.16			
	Textiles	2.6			
	Tires	0.4			
	Other Rubber	0.6			
	Furniture, Mattresses	1.4			
	Carpet and Padding	<u>2.3</u>			
	Total Consumer Products	7.6	3,900	4,500	5,200

Table 4-4, continued
Composition of Municipal Solid Waste Disposed in Island County

Category	Material	Percentage of Waste Disposed	Projected Quantity of Waste Disposed in Island County, tons per year		
			2005	2015	2025
Wood Wastes	Natural Wood	0.14			
	Treated Wood	0.7			
	Painted Wood	0.8			
	Dimension Lumber	3.2			
	Engineered Wood	1.7			
	Pallets and Crates	1.0			
	Other	1.2			
	Total Wood Wastes	8.7	4,500	5,100	6,000
Construction/ Demolition Wastes	Insulation	0.12			
	Concrete	0.6			
	Drywall	1.3			
	Soil, Rocks and Sand	0.7			
	Roofing	0.8			
	Other	1.4			
	Total C&D Wastes	4.9	2,500	2,900	3,400
Hazardous and Special Wastes	Used Oil and Filters	0.07			
	Household Batteries	0.08			
	Latex Paint	0.15			
	Medical Wastes	0.07			
	Other Hazardous Wastes	0.24			
	Other Non-Haz. Wastes	0.3			
	Total Haz./Special Wastes	0.9	460	530	620
Residuals	Ash, Dust	0.5			
	Fines, Sorting Residues	4.5			
	Sludges	1.1			
	Total Residuals	6.1	3,100	3,600	4,200
Totals		100.0	51,464	59,200	68,400

Source: Waste Composition Analysis for the State of Washington, Green Solutions, June 2003.

4.2 Other Special Waste

Certain types of solid waste that are routinely generated in households and businesses are managed separately from municipal solid waste. These waste materials include construction and demolition waste, land clearing debris, appliances, tires, auto bodies, biomedical waste, asbestos, e-waste and others. Septage and biosolids are also managed separately, but these are addressed through another plan. It should be noted, however, that about 70 percent of the households in Island County have septic systems.

There have been no direct measurements of the quantities of other special wastes generated in Island County. Although Island County maintains records of materials delivered to its receiving facilities, much of this waste is managed outside the County system.

4.2.1 Construction, Demolition and Land Clearing Debris

Construction, demolition, and land clearing debris include materials that are bulky and resistant to rapid biochemical degradation. They are typically difficult to compact and have the potential to be managed outside of the municipal solid waste system, although construction and demolition waste is estimated to contribute 13.6 percent of the MSW tonnages. Generation of these materials is variable with respect to time. General economic conditions, construction activities and major storms all affect the rate at which this waste category is generated.

4.2.2 Appliances

The Department of Ecology estimates that about one-third of one percent of municipal solid waste disposed is appliances (see “white/brown goods” in Table 4-4). Most discarded appliances are recycled. In 2005, 2,306 appliances were brought to County handling facilities.

4.2.3 Tires

The Department of Ecology estimates that about one-third of one percent of municipal solid waste disposed is used tires. Almost 80 percent of the used tires are recapped or recycled (including energy recovery). In 2005, 688 tires were delivered to County waste handling facilities and over 4,500 were collected through special collection events, in addition to the amounts handled by tire retailers and installers. Tire retailers and installers generally recycle or dispose of tires through their companies.

4.2.4 Auto Bodies

The Department of Ecology estimates that approximately 10,000,000 vehicles are recycled annually in the United States. No figures are currently available for the number of vehicles recycled or disposed in Island County.

4.2.5 Biomedical Waste

Biomedical waste includes a broad group of waste materials generated by medical and dental service providers, veterinary clinics, funeral homes and other related facilities. Biomedical waste includes the following waste materials:

- Cultures and stock of infectious agents and associated biological agents;
- Laboratory waste which has come into contact with cultures and stocks of infectious agents or blood specimens;
- Contaminated sharps such as needles, syringes, lancets and cover slips;
- Pathological wastes such as human tissue and anatomical parts;
- Human blood and blood products;
- Isolation wastes such as anthrax, smallpox and rabies;
- Surgical waste including soiled dressings and gloves;
- Animal carcasses exposed to pathogens; and
- Other waste identified by the local health officer as biomedical waste.

4.2.6 Asbestos

Asbestos is an insulating material that is considered a hazardous air pollutant. Any waste that contains more than one percent asbestos by weight is classified as asbestos waste. Asbestos waste is no longer accepted at County facilities (as of February 2004), and people with this waste are referred to specially-permitted private disposal services.

4.3 Moderate-Risk Waste

Moderate-risk waste refers to waste materials that have the characteristics of a hazardous waste (see Table 4-5) but are not regulated by the state or federal governments. Moderate-risk waste is exempt from state and federal regulation because it is classified as a household hazardous substance (household hazardous waste) or is generated by businesses in quantities below the threshold for regulation (small quantity generator waste).

Table 4-5
Characteristics of Hazardous Wastes

Waste Category	Characteristics
Ignitable	A liquid that has a flashpoint of less than 140 degrees F. A non-liquid capable of causing fire through friction, absorption of moisture, or spontaneous chemical change. An ignitable compressed gas or oxidizing agent.
Corrosive	A liquid with a pH of 2 or less, or 12.5 and above. A liquid that corrodes steel (SAE 1200) at a rate greater than 0.25 inch per year at 130 degrees F.
Reactive	An unstable substance that undergoes violent change without detonating, reacts violently with water, and/or forms explosive or toxic gases. A substance capable of detonation when subjected to strong force or heat.
Toxic	Substances that pose potential risks to human health as determined by standard testing procedures.
Listed Waste	Any substance listed by the Department of Ecology as being extremely hazardous or dangerous waste.

The Hazardous Household Substances List developed by the Department of Ecology is presented in Table 4-6. All of these products become household hazardous wastes when they are discarded.

Many businesses and institutions produce small quantity generator wastes. Small quantity generators produce hazardous waste at rates less than 220 pounds per month or per batch (or 2.2 pounds per month or per batch of extremely hazardous waste) and accumulate less than 2,200 pounds of dangerous waste on-site (or 22 pounds of extremely hazardous waste). Small quantity generators are conditionally exempt from state and federal regulation provided they are properly managing and disposing of their wastes. Small quantity generator options are listed in WAC 173-303-070(8)(b)(iii).

Other toxic wastes such as drug-contaminated demolition debris from illegal facilities may become a problem in the future.

**Table 4-6
Hazardous Household Substances List**

Substance or Class of Substance	Primary Hazards			
	Flammable	Toxic	Corrosive	Reactive
Group 1: Repair and Remodeling				
Adhesives, Glues Cements	.	.		
Roof Coatings, Sealants		.		
Caulkings and Sealants		.		
Epoxy Resins	.	.		.
Solvent Based Paints	.	.		
Solvents and Thinners
Paint Removers and Strippers		.	.	
Group 2: Cleaning Agents				
Oven Cleaners		.	.	
Degreasers and Spot Removers	.	.	.	
Toilet, Drain and Septic Cleaners		.	.	
Polishes, Waxes and Strippers	.	.	.	
Deck, Patio, and Chimney Cleaners	.	.	.	
Solvent Cleaning Fluid
Group 3: Pesticides				
Insecticides	.	.		
Fungicides		.		
Rodenticides		.		
Molluscides		.		
Wood Preservatives		.		
Moss Retardants		.	.	
Herbicides		.		
Fertilizers		.	.	.
Group 4: Auto, Boat, and Equipment Maintenance				
Batteries		.	.	.
Waxes and Cleaners	.	.	.	
Paints, Solvents, and Cleaners
Additives
Gasoline
Flushes
Auto Repair Materials	.	.		
Motor Oil		.		
Diesel Oil	.	.		
Antifreeze		.		
Group 5: Hobby and Recreation				
Paints, Thinners, and Solvents
Chemicals (including Photo and Pool)
Glues and Cements	.	.	.	
Inks and Dyes	.	.		
Glazes		.		
Chemistry Sets
Pressurized Bottled Gas	.	.		.
White Gas	.	.		.
Charcoal Lighter Fluid	.	.		
Batteries		.	.	.
Group 6: Miscellaneous				
Ammunition
Asbestos		.		
Fireworks

4.3.1 Moderate-Risk Waste Generation

Island County waste receiving facilities collect moderate-risk wastes generated in the planning area. Over the past five years, the number of individuals disposing moderate-risk waste at County facilities has decreased while the quantity of waste disposed has increased. Recent participation characteristics for the moderate-risk waste program are presented in Table 4-7.

Table 4-7
Recent Moderate-Risk Waste Generation in the Planning Area

Year	Population	Number of Customers	Amount of Waste Handled (pounds)
		(visits) at County Facilities	
2001	71,558	3,371	345,686
2002	72,670	3,523	204,523
2003	73,780	3,140	366,551
2004	74,890	3,023	441,099
2005	76,000	2,663	493,027

Participation in the moderate-risk waste collection program has varied at County solid waste facilities over the past five years. The number of participants appears to have increased, however participation counts and record-keeping was inconsistent in 2004 and 2005. Participation figures for the four solid waste facilities (excluding motor oil) is summarized in Table 4-8.

Table 4-8
Participation in Moderate-Risk Waste Program at the Four Solid Waste Facilities

Area	Number of Individuals Disposing Waste at County Facilities				
	2001	2002	2003	2004	2005
Oak Harbor	254	174	262	423	370
Central	1,610	1,794	1,249	948	996
Bayview	515	467	585	724	670
Camano	925	999	975	854	558

4.3.2 Moderate-Risk Waste Generation Projections

Generation rates for household hazardous waste typically range from 0.5 to 1.5 percent of the municipal solid waste stream. In 2003, a report prepared for the Department of Ecology estimated that 0.6 percent of the municipal solid waste stream in Washington State is hazardous waste. A moderate-risk waste quantity projection for the planning period based on the Department of Ecology's estimate and recycling records maintained by Island County is presented in Table 4-9. The top row in Table 4-9 shows current and projected tonnages for the moderate-risk waste recycled or properly managed through the County's program. Projections for 2015 and 2025 are based on population increases (see Table 3-2).

Table 4-9
Moderate-Risk Waste Quantity Planning Projection
(tons/day)

	Year		
	2005	2015	2025
Recycled/Managed	0.68	0.78	0.90
Disposed	0.85	0.97	1.13
Generated	1.53	1.75	2.03

4.3.3 Moderate-Risk Waste Composition

Almost one-half of the moderate-risk waste collected in 2005 was used motor oil. Paint and paint-related products comprise another one-third of the moderate-risk waste stream. A summary of the composition of moderate-risk waste delivered to collection facilities in 2005 is presented in Table 4-10.

Table 4-10
Composition of Moderate-Risk Waste Disposed in the Planning Area in 2005
(in percent)

Waste Material	Percent of Waste Disposed
Motor Oil	41
Oil-Based Paints and Solvents	11
Latex Paint	19
Poisons	4
Antifreeze	5
Dry Cell Batteries	3
Fluorescent Tubes	2
Acids and Alkalines	1
Other	4
Material Exchange	<u>10</u>
Total	100

Section 5

Waste Reduction

Waste reduction refers to any action that avoids the generation of waste or reduces the toxicity of waste before it reaches the waste stream. Other terms used to describe waste reduction include source reduction, waste prevention, waste minimization, pollution prevention and precycling. Washington State law designates waste reduction as the highest priority waste management strategy. Means to affect waste reduction include:

- Reduce materials used in product manufacturing;
- Increase the useful life of a product through durability and reparability;
- Decrease the toxicity of products;
- Reuse a product; and
- Reduce consumer use of materials.

5.1 Existing Program Elements

Existing waste reduction elements of the solid waste program include education, unit-based garbage fees, backyard composting, and disposal subsidies for reuse organizations. These program elements are discussed below.

5.1.1 Adult Education Programs

The Solid Waste Division currently sponsors the WSU Waste Wise program. Administered by WSU Extension Island County, this program provides training in waste management for community volunteers. In exchange for the training, the participants agree to volunteer 15-45 hours for public service projects, recycling at special events and education. The volunteers have assisted with a wide variety of special projects involving waste composting, smart shopping, sustainable living practices and waste generation surveys.

5.1.2 Student Education Programs

Education activities for students include classroom-based programs. For kindergarten through sixth grade students, site tours are also provided. For college-level students, support is provided on an as-requested basis for students conducting research or writing reports.

5.1.3 Unit-Based Garbage Fees

All solid waste collection service providers in Island County have established unit-based fees for solid waste collection. All collection service providers also offer a minimum level of service that is intended to promote waste reduction and recycling.

5.1.4 Backyard Composting

The Solid Waste Division, the WSU Waste Wise program and WSU Extension Island County

offer technical assistance to consumers initiating backyard composting projects. Services include a compost demonstration site and response to individual requests for information.

5.1.5 Disposal Subsidies for Reuse Organizations

The Solid Waste Division provides a 50 percent disposal discount for non-profit organizations that collect and resell used household products and clothing. The discount is intended to compensate for unusable items donated to the organizations.

5.2 Planning Issues

Waste reduction is the highest priority waste management strategy because it conserves resources, reduces waste management costs, minimizes pollution and promotes conservation. Waste reduction requires changes in production methods and consumption patterns and is influenced by national and international economies, and factors that are typically beyond the control of local government. Measuring waste reduction is also difficult because waste generation fluctuates with many variables including economic conditions, seasonal changes and local weather. Measurements for waste reduction are more relevant when they reflect specific products or operations. Waste reduction strategies for consumers, businesses and government are discussed in the sections below.

5.2.1 Consumer Waste Reduction Activities

Consumer waste reduction activities are usually focused in three areas: yard and garden wastes, individual purchasing decisions and promotion of product reuse.

Grasscycling

Grasscycling promotes a strategy where consumers leave grass clippings on the lawn rather than collecting them. The clippings provide nutrients and reduce the need for fertilizer. Grasscycling reduces the need for watering the lawn and may help suppress disease in turf grass.

Backyard Composting

Backyard composting promotes a strategy to compost yard, garden and food waste materials on-site for reuse rather than sending these materials to a central composting or disposal facility. Often participants are provided with a composting container and instructions to promote the strategy.

Waste Minimization

Waste minimization refers to waste reduction strategies that consumers may use for individual purchasing decisions. Specific waste minimization strategies include:

- Buying in bulk;
- Buying concentrates;
- Purchasing reusable products;

- Buying secondhand items;
- Avoiding over packaged items;
- Avoiding products containing hazardous ingredients;
- Borrowing or renting when possible;
- Purchasing durable and repairable products; and
- Using reusable shopping bags.

Promotion of Product Reuse

Use of second-hand products may be promoted by organizing swap meets, on-line reuse forums, or assisting organizations that sell used consumer products such as thrift shops. Sometimes durable containers for shopping or shipping are provided to encourage waste reduction.

5.2.2 Business Waste Reduction Activities

Manufacturers may use a number of internal strategies that affect waste reduction. Manufacturing processes may be redesigned or reconfigured to reduce waste. Products may be redesigned to increase durability, to facilitate reuse and repair, or may be reconfigured into smaller or more concentrated forms.

Business waste reduction programs are typically custom designed for each specific operation. However, a common approach for developing commercial programs includes the following components:

- Support and policy directives from management;
- A waste reduction team or coordinator;
- An accounting of materials purchased and waste produced;
- A reduction plan targeting specific materials or practices;
- Employee education; and
- Feedback and evaluation.

5.2.3 Governmental Waste Reduction Activities

At the institutional level, governments may achieve waste reduction through waste audits of their operations and through procurement policies that make waste reduction a purchasing priority.

A waste audit is an assessment of how materials flow through an institution. It is an accounting of the quantity of materials purchased, used, recycled and disposed. Waste audits help identify the points at which changes in purchasing, consumption, or use can reduce or eliminate material. A waste audit typically includes the following elements:

- Description of current waste disposal characteristics;
- Identification of materials to target for waste reduction;
- Development of cost estimates and operating recommendations;
- Implementation of recommendations; and
- Monitoring of progress.

Waste disposal practices can be characterized through an examination of the quantity and composition of waste materials. Materials can be targeted based on quantity, the availability of alternative materials and the potential for reuse. Costs include avoided costs (savings) and implementation costs (both capital and operational). Avoided costs include materials purchase costs, disposal costs, and replacement costs.

Government agencies may also preferentially purchase products that are durable, reusable and repairable, buy in bulk, and avoid the purchase of single-use disposable products. Governments can also consider toxicity, packaging, resource use and disposal requirements when purchasing products. Finally, government agencies may implement waste reduction activities associated with consumer and business programs such as on-site composting of yard and garden waste and changing office procedures to reduce paper consumption.

5.3 Alternative Waste Reduction Strategies

Six alternative waste reduction strategies are discussed below. The alternatives are not mutually exclusive.

5.3.1 Waste Reduction Alternative A-Regulation

Alternative A emphasizes rules to promote waste reduction. For example, yard and garden waste could be banned from disposal with municipal solid waste. The ban would require residents to compost on-site, subscribe to a yard waste collection service, or deliver their yard waste to a facility accepting it. Another waste reduction regulation could require businesses meeting certain waste generation criteria to conduct waste reduction audits and submit waste reduction plans to a solid waste management authority. Under this alternative, the planning jurisdiction may also request state action to ban excessive packaging or products that generate unacceptable waste materials. Alternative A costs include those associated with notifying and reminding residents of the waste bans, labor to enforce the bans, and labor to review and respond to 100 waste management plans submitted annually. Total annual costs are estimated at \$40,000.

5.3.2 Waste Reduction Alternative B-Economic Incentives and Disincentives

Alternative B could adjust waste collection and disposal fees to emphasize waste reduction over recycling. The waste collection fee structure could be modified to charge separately for recycling services rather than include those costs in waste disposal fees. The total revenue collected could remain the same and the fees assessed for collection of recyclables could be less than the fees for waste disposal. The fee structure would be intended to send the message that waste reduction avoids waste management costs. Alternative B costs include capital improvements and additional labor at County receiving stations to collect separate payments for recyclable materials. No additional expenditures would be necessary for current collection service subscribers. Also under Alternative B, a new waste collection service level, the microcan, would be established. The microcan container would be 10-12 gallons in size and a new rate reflecting lower waste transport and disposal costs. Capital costs are estimated at \$60,000 and annual operation and maintenance costs are estimated at \$84,000.

5.3.3 Waste Reduction Alternative C-Adult Education and Promotion

Alternative C would continue educational outreach programs for adults. The adult education programs would focus around a trained community-oriented volunteer group such as the WSU Waste Wise program. Citizen volunteers would be trained to promote waste reduction and other recommended waste management strategies in residential and commercial situations. Formal arrangements for residents and businesses to request assistance from the volunteers would be established and promoted. The use of specific tools, such as the 2Good2Toss website, would be publicized. Costs associated with the adult education program are estimated at \$53,000 per year and would continue through the planning period.

5.3.4 Waste Reduction Alternative D-Youth Education

Alternative D would conduct a youth education program annually. The youth education program would be directed at local school classrooms. Waste reduction strategies would be presented together with other local waste management information at both public and private schools. Tours would be combined with in-classroom visits after the tour to reinforce the messages and provide additional information. Costs associated with the youth education program are estimated at \$18,000 per year.

5.3.5 Waste Reduction Alternative E-Financial Support

Alternative E would provide some direct financial aid to support waste reduction activities. Non-profit organizations collecting used household products could continue to be assisted with discounted disposal fees for donated items that are not reusable. In addition, a local resource guide and web page consisting of a listing of organizations that promote waste reduction activities would be maintained. The guide would include thrift shops, repair businesses, tool rental businesses and other organizations and would be periodically published in local newspapers. Costs associated with Alternative D include \$7,500 per year for discounted disposal fees and \$4,300 per year for semiannual publication of the resource guide in local newspapers.

5.3.6 Waste Reduction Alternative F-Grants

Alternative F would provide grants to organizations, institutions or municipalities for various waste reduction programs. This alternative would allow partnerships with others that have similar interests, thus creating more cost-effective approaches, and would allow capitalizing on the energy or resources of other organizations. The cost of this option could vary widely depending on the amounts of the grants and activities targeted, but the first year or two could begin with a trial amount of \$5,000 to \$10,000.

5.4 Evaluation of Alternative Waste Reduction Strategies

The alternative waste reduction strategies were compared with respect to four evaluation criteria: consistency with the planning objectives, waste reduction potential, customer preferences and costs. The evaluation is discussed below.

5.4.1 Consistency with the Planning Objectives

All of the alternative strategies support the planning objective of emphasizing waste reduction as a fundamental waste management strategy. Alternative A-Regulation may not be consistent with the objective of ensuring convenient services for solid waste materials, but it would be consistent with the objective of increasing waste reduction. Customers may prefer yard waste recycling or even disposal rather than backyard composting and grasscycling. Alternatives C and D-Adult and Youth Education support the planning objective to provide customers with information and education to promote recommended waste management practices.

5.4.2 Waste Reduction Potential

Alternative A-Regulation would provide the most immediate waste reduction results because participation would be mandatory. All other alternatives promote waste reduction by encouraging changes in behavior or facilitating the recovery of used products. Behavioral changes require consumers to adopt and maintain an ethic of individual responsibility. Some consumers will respond to the conservation message while others may have difficulties understanding or relating to it.

5.4.3 Customer Preferences

Consumers typically prefer choice rather than mandates and lower costs rather than higher costs. Some customers may prefer the economic incentives of assessing separate charges for recycling and disposal although it would likely decrease recycling. Waste reduction education and promotion programs typically enjoy strong customer support. Direct financial support sometimes raises issues of fairness if an organization is perceived to receive benefits not available to similar organizations.

5.4.4 Costs

Alternative E has the lowest cost and so would be the most desirable option under a cost criterion. Alternative B is the most expensive option.

5.4.5 Rating of Alternatives

The alternative waste reduction strategies are compared with respect to the evaluation criteria in Table 5-1. Alternative C-Adult Education and Promotion, Alternative D-Youth Education, and Alternative E-Financial Support are ranked highest in the evaluation. These three alternatives are recommended to be pursued (see Section 14.1).

Table 5-1
Summary Comparison of Alternative Waste Reduction Strategies

Alternative		Rating			
		Consistency with Planning Objectives	Waste Reduction Potential	Customer Preferences	Costs
A	Regulation	L	M	L	M
B	Economic Incentives and Disincentives	M	L	L	L
C	Adult Education and Promotion	H	M	M	H
D	Youth Education	H	M	M	H
E	Financial Support	M	L	M	M
F	Grants	M	M	M	M
H - High		M - Medium		L - Low	

Section 6 Recycling

This section identifies current recycling opportunities, summarizes the types and quantities of materials recycled, and prioritizes recyclable materials for collection in County programs. It also discusses relevant planning issues and develops and evaluates nine alternative strategies to modify the current recycling program.

6.1 Existing Collection Program Elements

Existing collection services for recyclable materials include drop-off stations, residential curbside collection and commercial collection operations. These services are discussed below.

6.1.1 Drop-Off Stations

There are eight multimaterial drop-off collection stations for recyclable materials in Island County. Seven of the stations are located on Whidbey Island and one is located on Camano Island. The name, location, telephone number and hours of operation for each facility are presented in Table 6-1.

Table 6-1
Drop-Off and Buy-Back Centers in Island County

Facility	Address	Telephone	Hours
Oak Harbor Drop Box Station	3151 Oak Harbor Road	360-675-6161	9:30 - 5:00 Tues, Sat, and Sunday
Oak Harbor Recycle Center	2050 NE 16 th Ave	360-675-9193	10:00 - 5:00 Mon-Fri, 10:00 - 4:00 Sat
Christians Auto Recycling	615 Christian Road	360-675-8442	8:00 - 5:00 Mon-Sat
Maillard Landing Nursery	3060 N Oak Harbor Road	360-679-8544	8:30 - 5:00 Mon-Sat
Island County Solid Waste Complex	20018 SR 20	360-679-7386	9:30 - 5:00 every day
Island Recycling	20014 SR 525	360-331-1727	9:00 - 5:00 Tues-Sun
Bayview Drop Box Station	14566 SR 525	360-321-4505	9:30 - 5:00 Mon, Wed, Sat, Sun
Camano Island Drop Box Station	75 E Camano Hill Road	360-387-9696	9:30 - 5:00 every day

The drop-off stations accept a variety of secondary materials. The materials collected at each station are summarized in Table 6-2. In addition to the multimaterial drop-off collection stations, there are several single material stations for newspapers, corrugated cardboard, and aluminum cans. There are two drop-off stations for glass in Oak Harbor. The City of Langley operates a drop-off yard debris collection station at its wastewater treatment plant. Maillard Landing Nursery accepts sheetrock and yard debris. Wood waste is accepted at the Island County Solid Waste Complex and is shipped to Everett for co-generation purposes (this has been a very successful program, although it should be noted that co-generation is not defined as recycling).

Table 6-2
Summary of Materials Accepted at Drop-Off and Buy-Back Centers in Island County

	Drop Box Stations					
	Coupeville	Oak Harbor	Bayview	Camano	Oak Harbor Recycling	Christians Auto Recycling Island Recycling
Paper						
Newspaper	•	•	•	•	•	•
Corrugated Cardboard	•	•	•	•	•	•
Office Paper (a)	•	•	•	•	•	•
Magazines (a)	•	•	•	•	•	•
Telephone Books (a)	•	•	•	•	•	•
Catalogs (a)	•	•	•	•	•	•
Mixed Waste Paper	•	•	•	•	•	•
Plastic						
Bottles	•			•		•
Tubs	•			•		•
Glass						
Clear	•	•	•	•		•
Green	•	•	•	•		•
Brown	•	•	•	•		•
Ferrous Metals						
Tin Cans	•	•	•	•		•
Appliances, no cfc's	Fee			Fee	•	Fee
Appliances, w/cfc's	Fee			Fee		
Auto Bodies					Fee	Fee
Wire Ferrous	Fee			Fee	•	Fee
Other Ferrous	Fee			Fee	•	Fee
Non-Ferrous Metals						
Aluminum Cans	•	•	•	•	•	•
Aluminum Foil	•	•	•			•
Aluminum Scrap	•	• (b)	• (b)	•	•	•
Stainless Steel	•	• (b)	• (b)	•	•	•
Copper	•	• (b)	• (b)	•	•	•
Brass	•	• (b)	• (b)	•	•	•
Lead	•	• (b)	• (b)	•	•	•
Wire, Insulated	•	• (b)	• (b)	•	•	•
Other						
Yard and Garden	Fee					
Tires	Fee			Fee	Fee	

(a) Managed as mixed paper

(b) Small quantities only

6.1.2 Curbside Collection Programs

The City of Oak Harbor provides weekly curbside collection of secondary materials for all single family through fourplex dwelling units located within its jurisdiction. The City provides service to multifamily dwellings that use rollcars (but not those that have dumpsters) as well as businesses on a voluntary basis. The City collects the materials identified in Table 6-3 through the curbside program. The City of Oak Harbor also provides collection service for yard waste. Collection service is provided weekly from March 1 through November 30, and monthly from

Table 6-3
Materials Collected in the City of Oak Harbor Curbside Recycling Program

Category	Material
Paper	Newspaper Corrugated Cardboard Mixed Waste Paper
Plastic	#1-PET #2-HDPE (milky colored only)
Metals	Aluminum Cans Tin Cans Scrap Metal (in small quantities)
Other	Motor Oil Car Batteries

December 1 to February 28. Residents can purchase 30-gallon paper bags for \$3.25 at two local stores and city hall for prepaid service, or can sign up to receive a 95-gallon cart. The bags or cart are set out on the curb for collection and transported to a yard waste processing facility.

Waste collected by Island Disposal is brought to a processing facility near the Coupeville Transfer Station, where a portion of the newspaper, corrugated cardboard, mixed waste paper, glass, aluminum and tin cans, scrap metals, yard waste, wood waste, gypsum board and batteries are recovered for recycling. Island Disposal also collects (for a fee) corrugated cardboard and high-grade paper directly from individual businesses.

6.1.3 Public Education and Promotion

The County's education and promotion efforts for recycling focus on the WSU Waste Wise program. The WSU Waste Wise program educates citizen volunteers and prepares them to provide assistance to residents and businesses. The volunteer participants are given training in waste management systems, waste reduction and recycling, community waste management issues and public speaking. The participants agree to volunteer for community activities that further the goals of the WSU Waste Wise program. Recent or ongoing recycling-related educational activities include:

- Maintaining a compost demonstration site on Whidbey Island;
- Developing a compost demonstration site on Camano Island;
- Distributing waste management information at community events;
- Speaking to schools, businesses and community groups;
- Assisting school-related recycling projects; and
- Assisting the State Parks with recycling and sustainable practices.

The school education program is periodically revised to include in-classroom instruction. The program is active for one to two years and then focuses on school tours of solid waste facilities, and then returns to the classroom as new students enter the targeted grade levels (kindergarten through sixth grade).

6.2 Designation of Recyclable Materials

This section prioritizes secondary materials for recovery from the municipal solid waste stream through County-sponsored collection programs.

6.2.1 Evaluation Criteria

Secondary materials are prioritized for County-sponsored recycling programs using four criteria: the potential for further waste stream reduction, materials handling requirements, market price and consumer preferences. The evaluation criteria are discussed below.

Potential for Waste Stream Reduction

Targeting waste materials that are disposed in the largest quantities has the greatest potential to increase the rate of recycling. Under this criterion, materials that are reported to comprise more than three percent (by weight) of the Washington State municipal solid waste stream (see Table 4-4) are assigned a high rating. Those materials that are reported to represent between one and three percent are assigned a medium rating and those materials that represent less than one percent of the waste stream are assigned a low rating.

Materials Handling Requirements

Collecting secondary materials and preparing them for market requires equipment, facilities and labor. The costs of collection, processing and marketing are balanced with material sales revenues and avoided disposal costs. Under this criterion, those materials that are simple to collect and have fewer processing requirements are rated high. Those materials that require special collection procedures or extensive processing requirements are rated low. A medium rating is assigned to those materials that include characteristics of both the high and low rated materials.

Market Price

Markets for secondary materials are necessary for the continuing success of a recycling program. Together with the avoided costs of disposal, material sales revenues are used to offset the costs of collecting, processing and marketing the materials. Market prices in July 2006 for volume customers at Skagit Steel and Recycling Inc. in Burlington, Washington are summarized in Table 6-4. Under this criterion, those materials that have market prices greater than \$0 per ton are assigned a high rating. Those materials that have a market price from \$0 to \$(35) per ton are assigned a medium rating and those materials with a market price less than \$(35) are assigned a low rating.

Customer Preferences

Service-oriented enterprises must consider the desires of customers when establishing minimum levels of service. Satisfying customer preferences promotes participation. Under this criterion, those materials favored by members of the Island County Solid Waste Advisory Committee for collection will be rated higher.

Table 6-4
Market Prices for Secondary Materials in July 2006 at Skagit Steel and Recycling

Category	Material	Volume Purchase Price, \$/ton
Paper	Newspaper	20
	Corrugated Cardboard	35
	Mixed Waste Paper	15
Plastic	PET Containers (#1)	(60)*
	HDPE Containers (#2)	(60)
	Plastic Film	0
Glass	Clear Glass Containers	(60)
	Brown Glass Containers	(60)
	Green Glass Containers	(60)
Ferrous Metals	Tin Cans	0
	White/Brown Goods	40
	Other Ferrous Metals	60
Non-Ferrous Metals	Aluminum Cans	1,100
	Other Aluminum	900
	Other Non-Ferrous Metals	Varies

* () = figure in parenthesis indicates that a fee is charged.

6.2.2 Evaluation of Materials

Potentially recyclable materials are compared with respect to the evaluation criteria in Table 6-5.

Table 6-5
Rating of Recyclable Materials

Category	Material	Diversion Potential	Handling Requirements	Market Price	Customer Preferences
Paper	Newspaper	M	H	H	H
	Corrugated Cardboard	H	M	H	H
	Office Paper	M	H	H	H
	Mixed Waste Paper	H	M	H	H
Plastic	Containers	M	M	L	H
	Film and Bags	H	L	M	M
Glass	Clear Glass Containers	M	M	L	M
	Green Glass Containers	L	M	L	M
	Brown Glass Containers	L	M	L	M
Ferrous Metals	Tin Cans	M	M	M	H
	White Goods	L	L	H	H
	Mixed/Other Ferrous Metals	H	M	H	M
Non-Ferrous Metals	Aluminum Cans	L	M	H	H
	Other Aluminum	L	M	H	M
	Other Non-Ferrous Metals	L	M	H	M
Organics	Yard Waste	H	L	M	H
	Food Waste	H	H	L	M
Construction Debris	Wood Waste	H	H	M	H
	Gypsum Drywall	M	M	L	L
	Carpet Padding	L	L	L	H

H - High

M - Medium

L - Low

6.2.3 Designation of Recyclable Materials

Based on the ratings in Table 6-5, the materials have been divided into three groups: high-priority, medium-priority and low-priority. A summary of the materials assigned to each category is presented in Table 6-6. This list is used by County staff and others when evaluating existing and proposed recycling services, with greater emphasis and importance placed on those materials designated as high priority.

Table 6-6
Designated Recyclable Materials

High-Priority Materials	Newspaper Corrugated Cardboard Aluminum Cans Wood Waste Yard Debris
Medium-Priority Materials	Office Paper Mixed Waste Paper Clear Glass Green Glass Brown Glass Tin Cans Aluminum Scrap White/Brown Goods
Low-Priority Materials	Carpet Padding Food Waste Plastic Containers Plastic Film Other Ferrous Metals Other Non-Ferrous Metals Gypsum Drywall

The list in Table 6-6 is the “designated recyclable materials” required by state planning guidelines, and this list should be used for guidance as to the materials that should be recycled in the future when possible. This list 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; and
- Other conditions not anticipated at this time.

The Solid Waste Advisory Committee (SWAC) will review the list of designated recyclable materials on an as-needed basis and changes in the list can be made with the concurrence of a

quorum of SWAC members without going through a formal amendment process. Any changes in the list proposed by others should be submitted to the SWAC for their discussion and approval. With the concurrence of the SWAC, minor changes in the list could be adopted without formally amending the plan. Thus, minor changes should be able to be addressed in about 60 to 75 days at most, 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 and/or inability to achieve consensus could be used as indicators of what is a “major change”), then an amendment to the plan would be required.

6.3 Planning Issues

Management planning issues related to state recycling standards, recycling as a waste management tool and duplication of facilities are discussed below.

6.3.1 State Recycling Standards

Chapter 70.95 RCW requires solid waste planning jurisdictions to develop programs for the collection of source-separated secondary materials from residences in urban and rural areas. In Island County, for the purpose of solid waste management, the area within the City of Oak Harbor has been designated urban and the remainder of Island County has been designated rural.

In urban areas, the minimum recommended collection program includes curbside collection of source separated recyclable materials from single and multifamily residences. The City of Oak Harbor’s curbside collection program provides collection of source-separated materials from single family through fourplex dwellings.

In rural areas, the minimum recommended program includes drop-off and/or buy-back collection services at all solid waste transfer, processing or disposal sites or at other convenient locations. Recycling opportunities for source-separated materials are offered at all solid waste receiving facilities.

In addition to the collection services, Chapter 70.95 RCW requires monitoring programs for collection of source-separated waste from nonresidential sources when there is sufficient density to economically sustain a commercial collection program. Island County achieves this by working cooperatively with Ecology and utilizing the data they collect through the annual recycling survey.

Chapter 70.95 RCW also recommends implementation of programs to collect yard waste where it is economically feasible. Currently, curbside yard waste collection is available in the City of Oak Harbor. Segregated yard waste is accepted at the Coupeville Transfer Station, City of Langley wastewater treatment plant, and some private companies.

Finally, a program to promote the concept of recycling is required. The planning jurisdiction promotes recycling by distributing waste management information at community events, providing speakers for schools, businesses and community groups, assisting with school-related

recycling projects, and assisting State Parks with recycling and related activities. Information is distributed using telephone directories, newspapers, and web pages.

In summary, the existing urban and rural collection programs, nonresidential monitoring program, yard waste collection program, and education and promotion program meet or exceed the recycling service requirements in Chapter 70.95 RCW.

6.3.2 Urban and Rural Designations

Areas within the jurisdiction of the City of Oak Harbor are designated urban for recycling purposes. Areas annexed by the City of Oak Harbor become urban upon annexation. All other areas within the planning jurisdiction are rural. Any future changes in the urban and rural classifications, as established in the Island County Comprehensive Plan, should also be adopted for solid waste purposes.

6.3.3 Recycling Service Providers

Private contractors provide recycling services at the drop box stations. Contract terms vary from three to five years and include extension clauses for up to three annual extensions. Consideration will be given to extending all contracts to a five to six-year term during the planning period.

6.3.4 Planning Survey

During the fall of 1999, the Island County Public Works Department, together with the WSU Waste Wise program and volunteers, conducted a survey of Camano Island residents who subscribe to curbside collection services. The survey was intended to measure customer preferences for curbside collection of recyclables. The survey determined that 35 percent of the customers would be willing to pay an additional \$5 to \$7 per month for biweekly collection of recyclables.

This survey was repeated in 2004, and the 2004 survey confirmed the 1999 results. From November 8 through December 15, a survey was conducted by the Citizens for Clean Camano and the Island County Public Works Department. Out of 310 responses, 46 percent did not want to pay anything for curbside recycling and 39% were willing to pay a minimal amount (\$5 to \$10 per month).

6.3.5 Markets for Yard Waste

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.

Through a code amendment adopted in 2005, Island County permits private composting facilities.

6.3.6 Recycling as a Waste Management Tool

Recycling means turning old products into new products. Recycling includes collecting unwanted products, processing them into new materials, manufacturing new products and using the new products. All four steps are necessary for recycling to occur.

Recycling has been the primary focus of municipal solid waste programs over the past several years. Recycling has been promoted as a means of resource conservation and pollution prevention as well as a cost-effective alternative to waste disposal. Recycling has also been identified as a remedy for the negative consequences of waste disposal.

Unfortunately, recycling does not resolve all of the problems of solid waste disposal. Recycling can be more expensive than waste disposal. Recycling also has environmental costs. Collection, processing, transportation and remanufacture of recyclable materials all require the use of nonrenewable energy resources. All these activities generate pollution. Moreover, recycling is not an endless loop. There is always some loss of materials. The costs and benefits of recycling must be balanced with those of waste disposal to make recycling a useful waste management tool.

6.3.7 Duplication of Processing and Storage Facilities

Processing and storage facilities for recyclable materials are adequate on Whidbey Island. Three private firms (Oak Harbor Recycling, Island Recycling, and Island Disposal), and a federal agency (Naval Air Station Whidbey Island) all operate multi-material processing and storage facilities.

These facilities are expensive to construct and operate. Consolidation and/or specialization of these facilities could reduce the costs of recycling for ratepayers.

6.3.8 Recycling Program Costs

Recycling cost the Island County Solid Waste Division an estimated \$483,413 in 2005. There are no direct charges for recycling. Recycling costs are recovered through a surcharge on municipal solid waste deliveries. In 2006, each vehicle using the transfer stations or drop box facilities to dispose of waste or yard debris was assessed a \$4.14 surcharge to fund recycling services. This increased to \$7.28 in 2007 and is expected to increase in the future due to transportation costs.

6.4 Alternative Recycling Strategies

The nine alternative strategies discussed below consider modifications to the current County waste recycling program.

6.4.1 Recycling Alternative A-Terminate Collection of Low-Priority Materials

Alternative A would consider terminating collection of low-priority materials. Alternative A would potentially reduce recycling but increased disposal costs would be offset by savings in transportation costs and the negative market prices for the materials.

6.4.2 Recycling Alternative B-Implement and Promote Curbside Recycling

Alternative B would investigate and, if possible, implement curbside recycling services and then promote that service. Alternative B could also include options for increasing recycling through various innovative approaches such as alternating weeks for garbage and recycling collection (see Alternative C in Section 7.3.3), allowing customers to subscribe to collection services provided by state-certificated or other companies, or other approaches that prove feasible or negotiable.

If curbside recycling services will be provided by the state-certificated waste collection companies, an implementation (service level) ordinance most likely would be required. Such an ordinance would require a resolution by the Board of County Commissioners to establish collection of recyclable materials as a necessary service. That ordinance would need to specify which materials are to be collected (likely the typical curbside recyclables but excluding glass); how materials are to be collected (such as mixed, or single-stream); what collection frequency should be used (likely every-other-week to minimize costs); and establish other requirements. The curbside recycling service would also include new rate levels and containers, and a “revenue share” component to allow the hauler to defray the cost of acquiring new equipment and to provide incentives to broaden participation and to expand the type, kind and volume of recyclable materials collected under the program. An option that would be considered for any new curbside recycling service is the mandatory pay/voluntary participation approach, or possibly other arrangements that are used in other jurisdictions. Upon adoption, the County ordinance would be forwarded to the Washington Utilities and Transportation Commission (UTC), which is the state agency that regulates the certificated (franchised) garbage collection companies. The UTC would then direct Island Disposal, Inc. and Waste Management to initiate collection of recyclable materials as a part of routine waste collection services. The UTC would evaluate and approve rates for the increased services.

It is estimated that the costs of collection services would increase by about \$4 to \$7 per month per residence to support biweekly collection of recyclable materials, unless the alternating weekly schedule or other cost-saving measures were used. For the 12,550 residential customers in unincorporated Island County, the cost for this alternative could be up to \$753,000 per year if the cost were \$5 per household per month and the mandatory pay/voluntary participation approach is used.

6.4.3 Recycling Alternative C-Promote Private Composting

Alternative C would increase collection of yard waste by encouraging private companies to develop a collection and/or processing system for it. Island County could work with private companies to divert yard waste from disposal programs to a collection or processing facility, and to make sure those companies are properly permitted.

6.4.4 Recycling Alternative D-Investigate Single-Stream Recycling for Whidbey Island

Alternative D would investigate the possibility of single-stream recycling for drop-off sites and/or new curbside recycling programs (materials are already being collected this way in Oak Harbor and at the Camano Transfer Station). It is anticipated that glass would be collected separately (as Oak Harbor is doing), but in a single-stream approach all other recyclable materials (paper, cans, and plastic bottles) would be placed in a single container.

6.4.5 Recycling Alternative E-Investigate Local Markets for Glass

Alternative E encourages investigations into local markets for glass. Shipping glass off-island is not a cost-effective practice, due to the heavy weight and low market value for glass. A variety of local applications could be possible, including mixtures with asphalt or concrete to make roads, crushed glass as road and foundation base material, decorative and artistic applications, trench-marking, filtration, and various other uses. Cooperative efforts with other public departments or private companies, grant funds for glass crushers, and other approaches could be pursued.

6.4.6 Recycling Alternative F-Continue to Investigate Local Markets for other Recyclable Materials

In addition to investigating options for glass markets (see Alternative E, above), this alternative addresses the investigation of local markets for other materials. Many materials, most notably plastics, typically require large-scale efforts and significant capital investments and so would not be conducive to local markets, but some materials and applications could be addressed through smaller-scale efforts.

6.4.7 Recycling Alternative G-Continue to pursue Co-Generation Options for Wood Waste

The collection of wood at the Island County Solid Waste Complex is working well and is diverting significant quantities of wood waste to a beneficial use. Alternative G is proposed as a method to explore options, should the current market for the wood waste develop problems or another facility provide a more economical option.

6.4.8 Recycling Alternative H-Create an Off-Site Recycling Area for the Camano Transfer Station

Alternative H would help to address delays and congestion that are occurring at the Camano

Transfer Station by diverting recycling traffic to a separate area. This would make it easier on those customers that are only recycling, in that they would not need to wait in line with garbage customers to needlessly cross the scale. This idea was recently addressed in a *Traffic Circulation Report* by Skillings-Connolly, Inc. This report assumes the implementation of single-stream recycling, which would allow the use of two 105-yard trailers for collecting recyclable materials instead of the several smaller containers currently in use (if a cost-effective method of rain protection could be built). In addition to expanding recycling capacity, the use of larger containers and single-stream mixtures would maximize the use of the available capacity.

The Skillings-Connolly report does not provide separate cost figures for an off-site recycling area. Those costs are included with the costs of other facility improvements, which for the four alternatives examined range from \$20,620 to \$117,115 (these are the additional expenses for the recycling area only). The least-expensive option would require the use of stairs to reach the recycling containers because the containers would not be placed below grade, which is an obvious problem for safety reasons and may discourage recycling. The facility would need to be properly screened and attended to avoid visual impacts, litter problems and for access control.

6.4.9 Recycling Alternative I-Food Waste Composting

This alternative encourages the investigation of food waste composting, especially from commercial sources. Commercial sources are a priority because it is easier to collect a larger amount and a cleaner stream from commercial sources than from residential sources. The cost of this option cannot easily be estimated at this time because this idea needs to be refined more and possibly tested through a pilot project.

6.5 Evaluation of Alternative Strategies

The alternative recycling strategies are compared with respect to the evaluation criteria in the sections below.

6.5.1 Consistency with Planning Objectives

Two planning objectives relate directly to waste recycling: encouraging the recovery of marketable resources from solid waste and assisting the state to achieve its goal of a 50 percent recycling rate. Alternatives A and G are inconsistent with both recycling-related objectives because it reduces the total quantity of materials recycled. The other alternatives seek to increase the quantity of materials recycled, or support recycling in various ways. The other alternatives (exclusive of A and G) are rated high if they clearly support additional recycling, or medium if their feasibility or impact is uncertain.

6.5.2 Customer Preferences

Customers prefer choice rather than mandates and consistency rather than change. Alternative A limits choice and reduces the number of recyclable materials. Alternatives B, C, H and I provide more convenience for recycling or composting customers.

6.5.3 Costs

Alternative A would reduce costs by discontinuing the collection of low-priority materials. The cost of recycling these materials may exceed the cost of disposal. Alternative B may increase the cost of collection services, although the impact may be minor. Alternative H requires significant capital investment. Other alternatives are more neutral in terms of cost impacts.

6.5.4 Rating of Alternatives

The alternative recycling strategies are compared with respect to the evaluation criteria in Table 6-7. Eight of the alternatives (B, C, D, E, F, G, H and I) are highly rated overall and recommended to be pursued (see Section 14.2).

Table 6-7
Summary Comparison of Alternative Recycling Strategies

		Rating		
		Consistency with Planning Objectives	Customer Preferences	Costs
Alternative				
A	Terminate Collection of Low Priority Materials	L	L	L
B	Investigate Curbside Recycling	H	H	M
C	Promote Private Yard Waste Diversion	M	H	M
D	Investigate Single-Stream Recycling for Whidbey Island	M	M	M
E	Investigate Local Markets for Glass	M	M	M
F	Investigate Local Markets for other Materials	M	M	M
G	Continue to Pursue Co-Generation Options for Wood Waste	L	H	M
H	Create Off-Site Recycling Area at Camano Transfer Station	H	H	M
I	Food Waste Composting	H	H	H
		H - High	M - Medium	L - Low

Section 7 Collection

This section discusses existing collection services for municipal solid waste, identifies relevant planning issues, and develops and evaluates three alternative collection strategies.

7.1 Existing Program Elements

There are three solid waste collection service providers in Island County. The City of Oak Harbor provides collection services for residents and businesses located within its jurisdiction. Island Disposal, Inc. holds a certificate issued by the Washington State Utilities and Transportation Commission (UTC) to collect waste generated on Whidbey Island. Waste Management of Skagit County holds a certificate issued by the UTC to collect waste generated on Camano Island. The collection service providers, their mailing addresses and the current population density for each service area are shown in Table 7-1.

Table 7-1
Waste Collection Service Providers in Island County

Collection Service Provider	Address	Estimated Population Density of Service Area		
		Population in Service Area	Land Area, square miles	Density (people/square mile)
City of Oak Harbor	865 SE Barrington Drive Oak Harbor, W A 98277	21,720 ¹	9.38 ¹	2,316
Island Disposal, Inc.	P.O. Box 990 Coupeville, W A 98239	38,770	161.9	239
Waste Management	P.O. Box 546 Burlington, W A 98233	15,510 ²	37.1 ²	418

Notes: 1. From 2005 Data Book, by the Office of Financial Management.

2. From the Island County Comprehensive Plan.

Figures for Island Disposal are based on the difference between county totals minus the figures for other sub-areas. All figures are estimates for the year 2005.

Many residents and businesses haul their own waste to the waste receiving facilities. Island County accepts waste from self-haul generators at the facilities located at Oak Harbor, Coupeville, Bayview and on Camano Island. Slightly more than half (54 percent in 2005) of the waste generated within the planning area is collected through the curbside programs and the rest (46 percent) is self-hauled to a receiving facility. Current rates charged for collection and disposal services are summarized in Table 7-2.

A fourth collection service operates on Naval Air Station Whidbey Island. A private company under contract to the federal government collects waste throughout the air base, brings it to a transfer station that they also operate, and from there it is shipped out through a waste export system separate from the waste export system used by the rest of the county.

Table 7-2
Garbage Collection Fees for 2006 ^(a)
(Dollars/Month for Weekly Collection)

	City of Oak Harbor	Island Disposal, Inc.	Waste Management
Residential			
Weekly Collection			
Minican	13.46	11.43	11.40
One Can	18.42	14.31	13.20
Two Cans	30.89	20.29	19.80
Three Cans	41.08	28.97	26.40
Extra Can	4.50	3.09	3.35
Biweekly Collection ^(b)			
One Can		11.43	9.70
Monthly Collection			
One Can		6.20	4.70
Nonresidential			
1 cubic yard	95.09	80.91	74.43
1.5 cubic yards		114.49	93.63
2 cubic yards	162.23	149.26	113.40
3 cubic yards	228.01		151.80
4 cubic yards	290.96		191.20
6 cubic yards	388.48		260.93

(a) These fees are expected to increase in 2007 and beyond.

(b) Biweekly means every-other-week.

7.2 Planning Issues

This section discusses management issues associated with collection of municipal solid waste.

7.2.1 Service Provisions for Waste Collection

In municipalities, there are three alternatives possible for collecting solid waste: municipal collection, regulated collection and contract collection. Under the municipal collection service provision, waste collection is provided directly by employees of the municipality. The City of Oak Harbor has selected the municipal service provision. Under the regulated service provision, a municipality relinquishes its right to collect solid waste to the private collection company holding a certificate issued by the UTC for service in that area. The regulated firm charges fees for services that are approved by the UTC. The City of Langley has selected the regulated collection provision. Under the contract service provision, the municipality pays a private contractor an amount determined by a competitive procurement process. The Town of Coupeville has selected the contract service provision.

Areas outside municipal boundaries have no choice with respect to collection service providers. The UTC grants exclusive rights to specific haulers to collect waste in unincorporated areas and approves the fees charged for the services.

7.2.2 Service Requirements

Waste collection service may be provided on a voluntary (subscription) or mandatory (compulsory) basis. Municipalities may designate the nature of the service requirements within their boundaries. Typically, the municipal and contract forms of municipal collection are mandatory while regulated collection is voluntary.

In unincorporated areas, waste collection may also be voluntary or mandatory. In either case, the UTC-designated collection company provides the service. Counties are permitted to establish mandatory collection service when they establish a solid waste collection district under Chapter 36.58A RCW. The legislative body of a county may establish a collection district after conducting a public hearing and finding that mandatory collection is in the public interest and necessary for the preservation of public health. Collection services are then provided by the UTC- certificated collection company. Service fees are also approved by the UTC.

7.2.3 Collection Frequency

In western Washington, solid waste collection service for residential customers is typically provided weekly although biweekly and even monthly collection is available. Collection schedules for nonresidential waste generators are based on the waste generating characteristics of the individual customer.

7.2.4 Collection Location

The most common point of collection for residential waste is on public streets. This location requires residents to set out their waste containers on the scheduled collection day. Both certificated haulers will, however, collect waste on private roads if the road meets minimum standards and the resident or the residential association signs a “hold harmless” agreement.

Waste collection for nonresidential generators varies with the waste generating characteristics of the business or institution. The collection site is typically located where accessible to the collection equipment.

7.2.5 Quantity Limitations

Limits are placed on the quantity of waste materials that are accepted for curbside collection. Waste quantities must not exceed the manual or mechanical lifting capabilities of the personnel and equipment used to collect the waste. In addition, certain materials may be excluded from collection because they present potential danger to collection crews or processing equipment or because there is a policy to manage certain materials separately from municipal solid waste.

7.2.6 Container Requirements

Waste materials for curbside collection are typically stored in metal or plastic containers ranging in size from about 20 to 32 gallons, although 64- and 96-gallon containers are common in automated collection systems. Containers for nonresidential waste are typically one to three

cubic yards in size depending on the waste materials and collection equipment. Larger nonresidential storage containers may be connected to a stationary compactor to increase the density of the waste materials.

7.2.7 Rate Setting

Rate design considerations are markedly different under the municipal and contract provisions and the regulated collection provision. The municipal and contract provisions provide a municipality with wide discretion to implement local policy through garbage rates. Rate structures such as linear rates, where the cost for two cans per week for residential customers is double the cost of one can, can be used. When a regulated collection company provides the collection service, a cost-of-service methodology is used and the UTC must approve the rates submitted by the regulated companies. For rates based on a cost-of-service approach, only the true marginal increase can be charged for additional cans. Island County has the authority to set disposal rates at all waste receiving facilities in the county.

7.2.8 Billing

Under the municipal and contract service provisions, the municipality typically invoices customers. The contractor may be assigned this responsibility under the contract service provision in some situations. Under the regulated collection service provision, the waste collection company typically bills the customer. Municipal enforcement authority is necessary when the municipality has established mandatory collection by the state-regulated collection company. Cash is the required form of payment at County waste receiving facilities although some larger generators are periodically invoiced. Debit or credit cards may be accepted in the future at the County facilities if this can be done without causing delays and if approved by the County Commissioners.

7.2.9 Complaints and Performance Monitoring

Service complaints and performance monitoring are the responsibility of the municipality under municipal service provisions and the waste collection company under the regulated service provisions. Under the contract service provision, either the municipality or the contractor may have the lead responsibility for responding to customer complaints. Island County is responsible for complaints and performance monitoring at its waste receiving facilities. Island County Public Health has regulatory oversight for other solid waste matters.

7.3 Alternative Collection Strategies

Three alternative collection strategies are discussed below for the unincorporated areas of the planning jurisdiction: mandatory collection service, promotion of voluntary curbside collection services, and alternating service for waste collection and curbside recycling.

7.3.1 Collection Alternative A-Mandatory Collection Services in Unincorporated Areas

Alternative A considers the establishment of compulsory solid waste collection in the unincorporated areas of Whidbey and Camano Islands. Collection services would be provided under the regulated service provision. The UTC-designated collection company would provide the services at UTC-approved rates. Alternative A would reduce collection costs for existing collection service subscribers by reducing the travel distance and time between individual collection stops and spreading fixed costs over more customers. The level of service provided at the solid waste receiving facilities could be reduced to reflect fewer customers. About one-half of County households would begin paying monthly charges for collection services.

7.3.2 Collection Alternative B-Promotion of Voluntary Curbside Collection Services

Alternative B consists of promoting voluntary subscription service for routine garbage collection. The promotional efforts would focus on the cost savings associated with curbside collection. For example, delivering one can per week to a solid waste receiving facility costs three times as much as one can weekly curbside collection service in the unincorporated areas of the county.

7.3.3 Collection Alternative C-Alternative Collection Services for Garbage and Recycling

Alternative C consists of changing waste collection services, primarily to incorporate curbside recycling services (see Alternative B in Section 6.4.2). These changes may also include examining the feasibility of every-other-week garbage collection for single family residential customers, with curbside recycling offered in the alternating weeks, or the garbage collection schedule may remain weekly. The alternating schedule for garbage and recycling has worked well for Olympia, Port Townsend and others. Using this approach, curbside recycling could be added at a minimum of additional cost, and at the same time participation in the recycling program would be encouraged. Another approach that could also be considered for this alternative is the idea of using a split vehicle to collect garbage and recyclables each week but in a different compartment of the same truck.

To accomplish this alternative, Island County may need to adopt an implementation (service level) ordinance requiring Island Disposal and Waste Management to offer curbside recycling, and requiring haulers to provide alternative services for single family homes or to use other approaches as deemed desirable and feasible. For the certificated haulers, a revision in their tariffs would be required and the UTC would assist in setting the rates at an appropriate level. The implementation ordinance would need to describe the collection system, what commodities should be collected for recycling and the manner in which they should be collected (commingled or source-separated), any reporting requirements, and other important details.

7.4 Evaluation of Alternative Strategies

The collection alternatives are compared with respect to three evaluation criteria below. The criteria include consistency with the planning objectives, customer preferences and costs.

7.4.1 Consistency with Planning Objectives

The planning goal and one planning objective relate to the collection alternatives. The planning goal focuses on developing and maintaining a solid waste management system that protects public health and the environment in a cost-effective manner. The relevant planning objective is to ensure the availability of convenient and reliable services for managing solid waste.

Mandatory collection services ensure that waste materials are disposed on an ongoing basis. Piles of refuse are less likely to accumulate at homes and businesses because waste is collected regularly. The use of burning barrels (which are now illegal) is likely to be further reduced. Finally, queuing lines for waste disposal at the solid waste facilities would also be reduced.

Voluntary subscription for collection services would have similar benefits at a reduced level.

Alternative collection services would presumably increase the availability and convenience of recycling services, although the exact form that these services would take is hard to predict at this time.

7.4.2 Customer Preferences

Customers typically favor voluntary rather than mandatory collection service because they prefer choice. Mandatory collection in Whatcom County was discontinued soon after it was established due to customer complaints.

7.4.3 Costs

Increased subscription to collection services has the potential to reduce the unit costs of waste collection and disposal. With additional customers, the collection stops become closer together and the fixed costs can be spread over a larger customer base.

Under the mandatory service, self-haul customers would be required to begin paying for the curbside collection service. Their individual costs may increase or decrease depending on their previous use of the waste receiving facilities. Cost savings may also accrue to the solid waste system from reducing the number of self-haul customers from the receiving stations.

Alternative collection methods might increase costs over the current cost for weekly garbage collection, although the exact impact is hard to predict until the services and approach are more fully defined.

7.4.4 Rating of Alternatives

The three alternatives are compared with respect to the evaluation criteria in Table 7-3. Alternatives B and C are recommended to be pursued further (see Section 14.3).

Table 7-3
Summary Rating of the Alternative Collection Strategies

Alternative		Rating		
		Consistency with Planning Objectives	Customer Preferences	Costs
A	Mandatory Collection Service in Unincorporated Areas	H	L	H
B	Promotion of Curbside Collection Services	M	H	L
C	Alternative Garbage Collection	H	M	M
H - High		M - Medium	L - Low	

Section 8

Transfer

This section examines municipal solid waste transfer activities in the planning area.

8.1 Existing Program Elements

There are two solid waste transfer stations and two drop box stations permitted as disposal sites for municipal solid waste in Island County. The two transfer stations are the Island County Solid Waste Complex (near Coupeville) and the Camano Transfer Station. The two drop box stations are located near Oak Harbor and Bayview. A map showing the location of the transfer and drop box stations is presented in Figure 8-1, and the current fees charged at these facilities are shown in Table 8-1.

Table 8-1
Current Island County Solid Waste and Septage Fees (2007)*

Waste Type	Price/Unit
Solid waste, municipal or franchise hauler	\$104.25/ton, plus \$7.28 base fee
Solid waste, self-hauled	\$110.00/ton, plus \$7.28 base fee and 3.6% utility tax
Construction/demolition waste	\$130.00/ton, plus \$7.28 base fee and 3.6% utility tax
Oversized, hard-to-handle materials	\$163.00/ton, plus \$7.28 base fee and 3.6% utility tax
Yard and garden debris	\$76.00/ton, plus \$7.28 base fee and 3.6% utility tax
Minimum charge (up to 40 pounds)	\$10.00
Septage (Coupeville only)	\$0.145 per gallon
Appliances	\$21.50 each
Tires (auto and light truck)	\$7.50 each
Other recyclables and household haz. waste	No charge

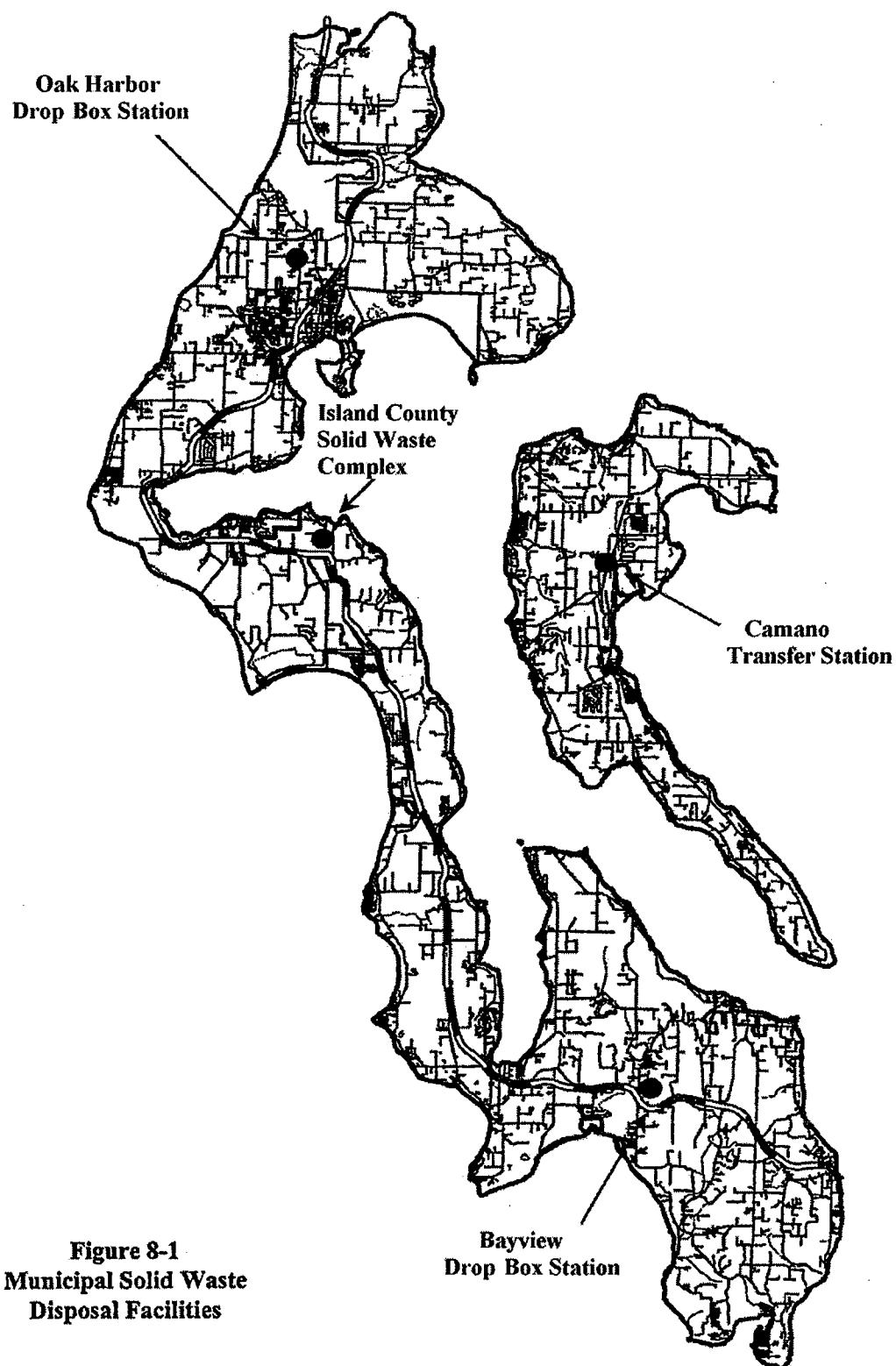
* Rates will rise in the future due to increased transportation costs and other factors.

8.1.1 Island County Solid Waste Complex

The Island County Solid Waste Complex is located at 20018 State Route 20, approximately two miles southeast of Coupeville. The station is open seven days a week from 9:30 a.m. until 5:00 p.m. The station consists of a scale house and two 70-foot weigh scales, 1,200 feet of on-site access roads, a 4,500 square feet tipping floor enclosed in a metal building, a mechanical compactor with trailer loading capabilities, a trailer storage area and employee facilities. There are 20 unloading positions where self-haul waste generators may deposit waste materials into up to five 105-yard open-top trailers away from the transfer station building.

8.1.2 Camano Transfer Station

The Camano Transfer Station is located at 75 East Camano Hill Road. The station is open seven days per week from 9:30 a.m. until 5:00 p.m. The station consists of a scale house and two weigh scales, 56,000 square feet of paved surfaces, 13 waste unloading positions, fencing, landscaping and employee facilities. Wastes are unloaded into four 105-yard trailers. A backhoe is used to compact waste material after it has been placed into the containers.



**Figure 8-1
Municipal Solid Waste
Disposal Facilities**

8.1.3 Oak Harbor Drop Box Station

The Oak Harbor Drop Box Station is located at 3155 North Oak Harbor Road. The station is open from 9:30 a.m. until 5:00 p.m. on Tuesdays, Saturdays and Sundays. The station consists of over 6,000 square feet of paved surfaces, four compacting 30-yard drop boxes, six 20-yard recycling boxes, fencing, landscaping and employee facilities.

8.1.4 Bayview Drop Box Station

The Bayview Drop Box Station is located at 14566 State Route 525 in Bayview. The station is open from 9:30 a.m. until 5:00 p.m. Monday, Wednesday, Saturday and Sunday. Municipal solid waste facilities at the station include 24,000 square feet of paved surface area, four compacting drop boxes (two 20-yard boxes and two 30-yard boxes), six 20-yard recycling boxes, fencing, landscaping and employee facilities.

8.1.5 NAS Whidbey Island

The Naval Air Station Whidbey Island (NASWI) has its own transfer station, with the waste hauled away by Allied Waste. Island County and NASWI have an agreement to provide each other with assistance in the event that a transfer station becomes partially or wholly inoperable. Each jurisdiction has agreed to accept solid waste from the other jurisdiction to the extent feasible in that situation. The agreement is intended to provide short-term emergency aid for disposal of solid waste materials.

8.2 Planning Issues

Planning issues relating to waste quantities, number of arriving vehicles and unloading positions, waste storage and facility standards are discussed below.

8.2.1 Waste Quantities

Transfer stations accept municipal solid waste from commercial collection service providers and self-haul generators. Drop box stations accept municipal solid waste from self-haul generators only. The quantity of municipal solid waste accepted at the transfer and drop box stations in 2005 and the six-year waste quantity growth rates are summarized in Table 8-2.

Table 8-2
Municipal Solid Waste Quantities Received at Transfer and Drop Box Stations in 2005

Municipal Solid Waste	Transfer Stations		Drop Box Stations	
	Coupeville	Camano	Oak Harbor	Bayview
Annual 2005 Quantity, tons	39,468	9,897	390	1,354
6-Year Annual Waste Quantity Growth Rate, percent	6.9	9.6	18.8	17.9

8.2.2 Arriving Vehicles and Unloading Positions

Because of seasonal fluctuations in the waste stream, weather, work schedules and other factors, the arrival times of incoming vehicles are not uniform with respect to time. The waiting time for an incoming vehicle to unload is a function of the number of arriving vehicles, the rate at which the vehicles can unload and the number of unloading positions. The number of arriving vehicles at the stations in 2005 and the number of unloading positions is shown in Table 8-3.

Table 8-3 Number of Arriving Vehicles and Unloading Positions at Island County Transfer and Drop Box Stations				
Municipal Solid Waste	Transfer Stations		Drop Box Stations	
	Coupeville	Camano	Oak Harbor	Bayview
Number of Arriving Vehicles in 2005	76,480	45,643	6,791	20,540
Unloading Positions	20	13	4	4

8.2.3 Storage

Waste transport containers, and the tipping floor at the Island County Solid Waste Complex, are used to store municipal solid waste at transfer and drop box stations. On-site storage capabilities must accommodate occasional mechanical malfunctions and periodic large loads of waste materials. The municipal solid waste storage capacity for each station is presented in Table 8-4.

Table 8-4 Municipal Solid Waste Storage Capacities at Island County Transfer and Drop Box Stations				
Municipal Solid Waste	Transfer Stations		Drop Box Stations	
	Coupeville	Camano	Oak Harbor	Bayview
Storage Capacity, tons	160 ^(a)	90	30	32

(a) An additional 200 tons could be stored in a 7,000 square feet storage yard adjacent to the transfer building.

Since operations commenced at the Island County Solid Waste Complex in 1992, equipment malfunctions and transfer interruptions have halted operations a number of times, once for 84 hours. In these instances, health and safety practices are followed and problems have not arisen.

8.2.4 Transfer and Drop Box Facility Standards

Solid waste transfer stations are subject to the facility standards included in Section 173-350-310 of the Washington Administrative Code. Transfer stations must:

- Control public access and prevent unauthorized traffic and illegal dumping of waste;
- Be sturdy and constructed of easily cleanable materials;
- Provide effective means to control rodents, insects, birds and other vectors;
- Provide effective means to control litter;
- Provide protection for the tipping floor from wind, rain or snow;

- Comply with local zoning and building codes, and other applicable local, state and federal laws and regulations;
- Provide pollution control measures to protect surface and ground waters from storm events and wash down wastewater;
- Provide all-weather roads in vehicular areas;
- Provide pollution control measures to protect air quality;
- Prohibit scavenging;
- Provide an on-site attendant during operating hours;
- Post entrance sign(s) identifying the facility, its operating hours and a list of unacceptable materials; and
- Have the ability to summon fire, police and emergency service personnel.

Drop box facilities are subject to the facility standards in Section 173-350-310 of the Washington Administrative Code. Drop box facilities must:

- Be constructed of durable watertight materials with a lid or screen on top that prevents loss of materials during transport and access by rats and other vermin, and control litter;
- Be serviced as often as necessary to ensure adequate dumping capacity at all times (storage outside the box is prohibited); and
- Have a sign posted at the entrance identifying the facility, its operating hours and unacceptable materials.

A solid waste permit from Island County Public Health is required to operate a transfer or drop box station in the planning jurisdiction. All transfer and drop box stations currently meet the state facility standards and permit requirements.

8.3 Alternative Transfer Strategies

Seven alternative municipal solid waste transfer strategies are discussed in the sections below.

8.3.1 Transfer Alternative A-Increase the Capacity of the Oak Harbor Drop Box Station

The amount of waste and number of vehicles using the Oak Harbor Drop Box Station has more than doubled in the past seven years. The capacity of this site could be increased by replacing the three existing 20-yard compactors with 30- to 35-yard compactors. The cost for this would be about \$75,000.

8.3.2 Transfer Alternative B-Upgrade Compactor at the Island County Solid Waste Complex and Increase the Storage Capacity at the Island County Solid Waste Complex and Camano Transfer Station

Failure of the waste compactor and/or interruption of the transfer system have interfered with waste processing operations for several days in the past twelve years. Although the transfer facility can accommodate storage of the current peak day flow rate, it will not be able

accommodate the peak day by the year 2010. Moreover, operating experience indicates that up to 3.5 days storage may be necessary.

Transfer Alternative B would develop additional storage capacity adjacent to the two transfer stations and upgrade the Amfab compactor at the Island County Solid Waste Complex. The additional storage capacity would provide the ability to hold three to four days' worth of waste, depending on the number of available open-top trailers. Upgrading the compactor would provide more capacity and reliability. A concept-level capital cost estimate for Transfer Alternative B is estimated at \$870,000.

8.3.3 Transfer Alternative C-Consolidate Bayview Drop Box Station and Island Recycling

The Bayview Drop Box Station and Island Recycling are located on County-owned property in south Whidbey Island. The Bayview Drop Box Station is operated by County employees and accepts municipal solid waste, recyclable materials and moderate-risk waste. Island Recycling is operated by a private contractor and accepts primarily recyclable materials. Both facilities are located on Highway 525 about six miles apart. Under Transfer Alternative C, these two facilities would be consolidated into a single waste receiving facility. Future capital improvements such as weigh scales and capacity improvements could then be focused at a single location capable of serving customers of both facilities. While this approach may increase overall efficiencies in the future, there would also be additional costs for capital improvements plus relocation and closure expenses that would need to be identified more clearly at a later date.

8.3.4 Transfer Alternative D-Increase Unloading and Storage Capacities at Bayview

Waste delivered to the Bayview Drop Box Station has increased at an annual rate of almost 18 percent over the past six years. In 2005 the facility served 20,540 customers delivering 1,354 tons of municipal solid waste (this figure does not include recycling-only customers). Waste quantities are expected to continue to increase.

Increasing the capacity of the Bayview Drop Box Station could be accomplished simply by switching to all 35-yard compactors. Some reconfiguration of the site layout may also be helpful, plus the installation of a retaining wall on the southern edge of the property. These modifications can be accomplished for approximately \$75,000.

8.3.5 Transfer Alternative E-Continue to Explore Maximizing Efficiencies at Camano

Waste quantities at the Camano Transfer Station are currently increasing about 10 percent per year, and are expected to continue to increase. Transfer Alternative E would add one more trailer loading position at the northeast corner of the existing site to accommodate the increased waste amounts. Alternative E would also complete development at the existing site, including double scaling and revised traffic flow made possible by the relocations of Camano Hill Drive/East Camano Drive intersections and cul-de-sac. Improvements associated with this relocation will occur in 2007-2008 at an estimated cost of \$150,000 to \$200,000.

8.3.6 Transfer Alternative F-Construct New Transfer Station at Camano

Transfer Alternative F considers the development of a new transfer station at a new location on Camano Island. The new facility would permanently replace the existing transfer station.

The new facility would include weigh scales and a gatehouse, on-site roads, a transfer building, a trailer storage area, environmental control systems, fencing and landscaping. Arriving vehicles would be weighed at the gatehouse and directed to the transfer building. An attendant would direct vehicles to one of ten or more unloading position where waste materials would be discharged onto a tipping floor. The waste materials would be moved into a compactor with a stationary crane.

A concept-level capital cost estimate for Alternative F is presented in Table 8-5. Capital costs are estimated at \$1,802,000. Annualized capital costs are estimated at \$172,450 or \$17.42 per ton based on 2005 waste quantities.

Table 8-5
Concept-Level Capital Cost Estimate for a New Camano Transfer Station

Item	Quantity	Unit	Unit Cost, \$	Amount, \$	Useful Life, years	Annual Cost @ 4%, \$
<i>Land</i>	10	acre	12,000	120,000	20	8,830
Direct Capital Costs						
Site Development	1	lump sum	300,000	300,000	20	22,100
Scales and Gatehouse	2	lump sum	108,000	200,000	15	18,000
Transfer Building	2,500	square feet	96	300,000	20	22,100
Yard Donkey	1	each	30,000	30,000	7	5,000
Loader	1	each	180,000	<u>250,000</u>	7	41,700
Subtotal Direct Capital Costs				1,080,000		
Overhead and Profit	20	percent		<u>216,000</u>	20	15,900
Total Direct Capital Costs				1,296,000		
Indirect Capital Costs						
Engineering and Design	7	percent		72,000	20	5,300
Legal, License Costs	5	percent		51,000	20	3,800
Sales Tax	8	percent		<u>82,000</u>	20	6,000
Total Indirect Capital Costs				205,000		
Subtotal Capital Cost				1,621,000		
Contingency Allowance	20	percent		<u>324,900</u>	20	<u>23,900</u>
Total Capital Costs				1,945,000		172,500

8.3.7 Transfer Alternative G-Increase or Modify Rates

A rate study conducted in the fall of 2006 concluded that the disposal rates at the transfer stations and drop boxes needed to be increased to more accurately reflect the true costs of services provided by these facilities. Likewise, the results of future rate studies may also lead to changes in the disposal rates. Other factors and events, such as increased transportation and associated

costs, may contribute to future changes in the rates. These changes will not occur without a resolution adopted by the Island County Board of County Commissioners, with the opportunity for public comment that accompanies such resolutions.

The latest rate change was adopted March 12, 2007 and became effective March 15, 2007. Those rates are intended to be effective through at least December 31, 2009, and so any future rate changes would not occur until 2010 or later.

8.4 Evaluation of Alternative Strategies

The transfer alternatives are compared with respect to three evaluation criteria below. The criteria include consistency with the planning objectives, customer preferences and costs.

8.4.1 Consistency with Planning Objectives

Expanding the Oak Harbor Drop Box Station would increase the level of service provided for north Whidbey Island residents. This would be consistent with the planning objective of providing convenient and reliable services.

Increasing the waste storage capacity at the Island County Solid Waste Complex supports the planning goal of maintaining a solid waste management system that protects public health and the environment in a cost-effective manner. Storing waste in trailers rather than in a storage yard better protects water quality and avoids problems with wind-blown debris.

Consolidating the Bayview Drop Box Station and Island Recycling would reduce the level of service provided for south Whidbey Island residents. Consolidating the two operations may allow an increase in service levels at a single facility, but this idea needs further study.

Increasing the unloading and storage capacities at Bayview would increase the level of service at that site.

An additional waste container and improved scaling and circulation patterns at the Camano Transfer Station would further increase the unloading and storage capacities of the facility.

A new transfer station on Camano could increase materials handling efficiencies. All waste materials would be loaded into transfer trailers and delivered directly to an intermodal facility in Everett or Seattle. The transfer building would also protect the unloading operations from problems associated with wind and rain.

Increasing or modifying the disposal rates would have a negative impact on the goal of providing convenient access to disposal services, but if rates need to be increased to cover costs then this may be unavoidable. Increased disposal rates may also have the effect of increasing recycling.

8.4.2 Customer Preferences

Expanding the Oak Harbor Drop Box Station would provide greater convenience for north Whidbey Island residents and businesses.

Increasing storage capacity at the Island County Solid Waste Complex would provide a redundant transfer capability. Waste materials could bypass the compactor when it malfunctions allowing the other waste handling operations to continue functioning in a routine manner.

A consolidated Bayview Drop Box Station and Island Recycling facility would require some customers to drive six miles further for drop-off waste disposal services. Customer service may or may not be improved for customers only disposing of waste or only recycling by consolidating future facility improvements at a single location.

Increasing the unloading and storage capacity at Bayview would provide increased customer service at that facility.

The additional trailer loading position at the Camano Transfer Station would increase the waste unloading and storage capacity and, during peak times, reduce the waiting time to unload.

A new transfer facility for Camano could improve operating efficiencies. A larger site would increase the length of on-site roads to avoid off-site queuing. All waste materials would be loaded into transfer trailers for direct delivery to the intermodal facility. The unloading operations would also be protected from wind and rain.

Any rate increases in the future, for either the general public or for municipal and private haulers, would be contrary to customer preferences.

8.4.3 Costs

Expanding the Oak Harbor Drop Box Station would cost approximately \$75,000.

Increasing the unloading and storage capacities at the Island County Solid Waste Complex would cost an estimated \$200,000.

Consolidating the Bayview Drop Box Station and Island Recycling would not result in immediate cost savings, and would in fact require a significant capital investment. However, future facility improvements could be focused on a single facility.

Installing larger containers at Bayview would cost an estimated \$75,000.

Capital costs for the additional trailer loading position at the Camano Transfer Station are estimated at \$121,000 plus \$150,000 to \$200,000 in site improvements in the 2006-2008 time frame.

The new transfer facility on Camano Island would result in capital expenditures totaling \$1,945,000.

Increasing or modifying rates would be cost-neutral on the assumption that rates would reflect and cover the true costs of providing services.

8.4.4 Rating of Alternatives

The alternative waste transfer strategies are compared with respect to the evaluation criteria in Table 8-8. Six of the alternatives (A, B, D, E, F, and G) are recommended to be pursued (see Section 14.4).

Table 8-6
Summary Comparison of Alternative Transfer Strategies

Alternative		Rating		
		Consistency with Planning Objectives	Customer Preferences	Costs
A	Expand the Oak Harbor Drop Box Station	M	M	M
B	Increase Storage Capacity at the Coupeville Transfer Station	M	M	M
C	Consolidate Bayview Drop Box Station and Island Recycling	L	L	H
D	Increase Capacity at Bayview	M	H	M
E	Continue to Explore Methods to Increase Efficiency at Camano	H	H	M
F	Develop New Transfer Station for Camano Island	H	H	H
G	Increase or Modify Rates	L	L	M
H - High		M - Medium	L - Low	

Section 9

Transport and Disposal

This section presents information relating to current transport and disposal operations and closed municipal solid waste landfills in the planning area. Alternative transport and disposal management strategies are also discussed.

9.1 Existing Program Elements

Existing disposal program elements are discussed in the following sections.

9.1.1 Transport and Disposal Operations

Island County has executed a contract with Allied Waste to provide transport and disposal services for non-recyclable waste generated in Island County. Under the agreement, waste from Island County is trucked to Everett and transported by rail to the Roosevelt Regional Landfill. The contract became effective in 2007 and will be in effect from 2007 through 2012, with provisions for contract extensions.

9.1.2 Closed Municipal Solid Waste Disposal Sites

There are seven closed solid waste disposal facilities in the planning jurisdiction. The general location of the each site and the current ownership are identified in Table 9-1.

Table 9-1 Closed Municipal Solid Waste Disposal Facilities		
Landfill Facility	Ownership	Location
Camano Island	Island County	West of Triangle Cove
Coupeville	Island County	2 Miles SE of Coupeville
Cultus Bay	Island County	South End of Whidbey Island
Freeland	Island County	2 Miles NW of Freeland
Hastie Lake	Island County	5 Miles SW of Oak Harbor
Langley	City of Langley	1 Mile SW of Langley
Oak Harbor	City of Oak Harbor	Oak Harbor

9.1.3 Post-Closure Care of the Coupeville Landfill

The Coupeville Landfill, closed in 1992, is subject to the post-closure monitoring requirements specified in Chapter 174-304 of the Washington Administrative Code. Specifically, the planning jurisdiction is responsible for:

- Maintaining the cover system and making repairs to correct the effects of settlement and erosion;
- Maintaining the vegetative cover;
- Preventing storm water from damaging the cover system;

- Monitoring ground water quality and gas characteristics; and
- Maintaining the landfill gas management system.

Post-closure care of the Coupeville Landfill is required until the site has stabilized. Routine post-closure activities are funded through current operating revenues. A post-closure fund in the amount of \$82,000 has been reserved for non-routine maintenance and repairs. Routine activities are guided by a new post-closure plan that was developed and approved in 2003.

9.2 Planning Issues

Planning issues related to waste disposal capacity and ground water quality at the former Coupeville Landfill are discussed below.

9.2.1 Disposal Capacity

State solid waste planning guidelines require planning jurisdictions to consider waste disposal needs for a 20-year period. Island County has a waste transport and disposal contract through the year 2012. With at least three regional landfills expected to operate for the next 50 to 100 years (see Section 9.3), future disposal needs can continue to be met by the waste export system.

Because Whidbey and Camano Islands have been designated sole source aquifers under the federal Clean Water Act, no new municipal solid waste landfill may be sited within the planning jurisdiction.

9.2.2 Ground Water Quality at the Coupeville Landfill

Two aquifers have been identified in the vicinity of the Coupeville Landfill: an upper unconfined aquifer and a lower confined or partly confined aquifer. The two aquifers are referred to as the shallow and deep aquifers. The shallow aquifer appears to be discontinuous; ground water has only been observed in the shallow aquifer on the west portion of the site.

There are 27 ground water monitoring wells developed to sample both the shallow and deep aquifers, including two new upgradient wells across and southerly of SR20. In addition, four water supply wells in the vicinity of the landfill provide access to the deep aquifer. All monitoring wells are sampled quarterly for 13 indicators of landfill leachate. In addition, quarterly samples have been obtained for 15 metals and 40 volatile organic compounds since 1998. Statistical analysis conducted in 2006 may lead to a change the testing frequency.

The influence of the waste disposal activities on ground water quality at the Island County Solid Waste Complex is apparent in the general chemistry and ground water levels of volatile organic compounds, inorganics, and other parameters. The monitoring wells immediately adjacent to the disposal areas indicate impacts to the ground water. Impacts are more pronounced in the shallow aquifer wells than in the deep aquifer wells for most contaminants.

Migration of contaminants appears to be attenuated as evidenced by the reduced concentrations and lack of increasing trends in target parameters at “second tier” monitoring wells located 400

to 750 feet downgradient of the disposal areas. Generally, contaminants do not appear to have migrated to the second tier of monitoring wells located 600 feet northeast with the exceptions of elevated sulfate in one well, and elevated calcium in four others. Analytical results from the deep well located 400 feet north of the disposal areas indicates that some waste constituents (chlorodifluoromethane, dichlorodifluoromethane, diethyl ether, tetrahydrofuran, and vinyl chloride) have migrated that far, although the concentrations are notably less than those observed at the "source area." Dichlorodifluoromethane was also detected in two ground water monitoring wells (500 feet and 300 feet west of the disposal areas). Data clearly show the water quality differences between monitoring wells within or immediately adjacent to the disposal area and the remaining second tier wells and thus demonstrate the influence of the disposal areas on the ground water chemistry at the site. The wells within or immediately adjacent to the disposal area have elevated concentrations of a number of parameters.

Given identified flow direction and rates, it may be concluded that the existing monitoring network is reasonably likely to detect contaminants if they are released from the landfill. No adjustments to the monitoring network are recommended at this time.

The lack of shallow ground water monitoring data from the northwest corner of the site (due to maintenance problems with one well) represents a notable gap in the monitoring data, but this well was replaced late in 2005. It is recommended that at least eight quarters of data be collected from the replacement well to re-establish baseline conditions at this portion of the site.

Ground water contaminants will continue to be evaluated to identify trends. This evaluation may lead to the conclusion that additional investigation is needed of potential localized source areas that may need to be controlled (through steps such as additional landfill gas extraction in this area, which could potentially be achieved through adjustment of the existing system). Corrective measures recently completed include capping the construction waste area and correcting drainage to reduce infiltration through the waste, and enhancement of the landfill gas extraction system.

Ground water monitoring at an appropriate level to ensure accurate assessment of ground water quality will be continued. The Solid Waste Division will pursue long-term monitoring optimization (LTMO) using EPA software and other statistical tools to develop a revised monitoring strategy that maximizes efficiency while maintaining site and regulatory objectives. Additional upgrades to the system will be developed as necessary.

9.2.3 Ground Water Quality at the Freeland Site

An additional three monitoring wells were recently added to the existing three wells used for monitoring ground water quality at the Freeland site. The County is engaged in a voluntary cleanup project, under Ecology's program, for this site. The County has partial responsibility for this site due to a prior contractual agreement for the scrap metal operations that were conducted there. This cleanup was completed by the end of 2006, but monitoring will be continued for the planning period.

9.2.4 Landfill Gas Monitoring

The results of a study conducted in 2005 show that landfill gas (methane and carbon dioxide) is still present in the soils surrounding three disposal areas. Landfill gas production likely reached its peak between one and three years after waste disposal ceased (1978 for the City of Coupeville Landfill, 1991 for the County's solid waste landfill and 2001 for the County's construction waste landfill). As expected, data shows the highest landfill gas concentrations and depressed oxygen concentrations usually occur in the gas probes closest to the landfill. Gas production is expected to be in a state of ongoing decline due to the nature of waste decomposition processes. Current soil gas movement is much less than during the active filling period and generally ceases within ten years after waste disposal ends. The slow movement of gas appears to allow the methane to oxidize before reaching gas probe sample locations. This is due to the age of waste, very low gas production, and the method of gas movement as well as the surrounding geologic formation (sandy/gravelly soils).

The Coupeville Landfill site is in a transitional period in gas control system operations and gas probe monitoring. In May 2005, new in-refuse vertical extraction wells were activated and the air injection system was de-activated. In July 2005, monitoring of the new gas probes took effect and this replaced the monitoring at many of the existing gas probes. In November 2005, three new native soil extraction wells began operation. Test results show that, for the most part, methane is being oxidized and is not present in soils near the property boundary. Continued routine monitoring and fine-tuning of the active gas extraction wells is recommended for the foreseeable future.

Conducting routine monitoring, monitoring under optimum barometric conditions (to observe maximum gas concentrations), and tracking additional monitoring results will provide more insight into extreme conditions that could be experienced at the site. At this time, no action other than continued monitoring is recommended.

9.3 Alternative Transport and Disposal Strategies

Three alternative regional waste disposal facilities serving Pacific Northwest communities are identified below. Three other alternatives, which address various operational issues, are also discussed below.

9.3.1 Transport and Disposal Alternative A-Waste Management

Waste Management, Inc. operates the Columbia Ridge Landfill and Recycling Center near Arlington, Oregon in Gilliam County. The Columbia Ridge Landfill is located about 140 miles east of Portland, Oregon. It has an estimated disposal capacity of 260 millions tons (or 115 years of capacity at the current disposal rate of 2.28 million tons per year). The Union Pacific Railroad provides rail transport service from Seattle to Arlington where the waste is transported by truck to the landfill.

9.3.2 Transport and Disposal Alternative B-Rabanco Regional Disposal Company, Inc.

The Rabanco Regional Disposal Company, Inc., an Allied Waste Industries, Inc. affiliated company, operates a landfill north of Roosevelt in Klickitat County, Washington. The landfill has the capacity to accept an additional 212 million tons of waste (as of mid-2006). Burlington Northern Railroad provides transport services from loading facilities in Everett and in Skagit County to Roosevelt, Washington.

9.3.3 Transport and Disposal Alternative C-Waste Connections

The Finley Buttes Landfill is owned and operated by Waste Connections, Inc. The Finley Buttes Landfill is located approximately ten miles south of Boardman, Oregon in Morrow County. Tidewater Barge Lines transports municipal solid waste by barge from Vancouver, Washington 180 miles upriver to a port facility owned by Tidewater Barge Lines at the Port of Morrow. Waste materials are unloaded there and then trucked 12 miles to the landfill. The landfill has an estimated remaining waste disposal capacity in excess of 100 years at the current disposal rate.

9.3.4 Transport and Disposal Alternative D-Purchase Additional Buffer Area at the Coupeville Landfill

The available ground water data in the vicinity of the former Coupeville Landfill indicate that ground water flows east in the shallow aquifer and east-northeast in the deep aquifer. The edge of the fill area is the point where potential ground water contaminants must not exceed maximum levels.

Alternative D contemplates the purchase of up to ten acres of property located directly east and south of the former landfill to provide additional buffer area and prevent encroachment by future development. The estimated cost of acquiring the property and a small building on the property is \$200,000. The Solid Waste Division should also consider the purchase of land around other solid waste facilities for buffer purposes as that land becomes available or necessary.

9.3.5 Transport and Disposal Alternative E-Develop New Water Quality Monitoring Wells, if Necessary

Transfer and Disposal Alternative E consists of the development of additional ground water monitoring wells at the closed Coupeville Landfill and at other sites as those wells may become necessary to monitor water quality. Well development costs are estimated at \$25,000 per well, although this cost would be affected by location, depth of drilling, and other factors.

9.3.6 Transport and Disposal Alternative F- Investigate Additional Methods for Densifying Wastes

The density of the waste being transported out of the county has become a critical economic factor due to increasing transportation costs. As transportation costs continue to increase, additional efforts to densify the wastes may become cost-effective. The Solid Waste Division

should identify, and implement where cost-effective, methods to increase the density of waste and thus maximize the efficiency of the transportation system. The expense for this alternative could vary substantially depending on the methods used, from as low as \$20,000 for smaller pieces of equipment up to \$200,000 or more for larger pieces of equipment or site improvements.

9.4 Evaluation of Alternatives

The availability of the alternative solid waste transport and disposal service providers encourages competition based on price. Assuming all three facilities continue to operate within their permit requirements, the cost of transport and disposal services will continue to be the primary consideration in procuring services.

Procurement planning for municipal solid waste transport and disposal services may commence in 2011. At that time, options for waste disposal services past 2012 could include negotiating an extension to the current contract, soliciting new waste export bids, or entering into a regional agreement to participate in a disposal system serving several counties.

These three alternatives are recommended to be pursued (see Section 14.5):

- Alternative D-Purchase of additional buffer areas provides time to further characterize ground water flow and quality in the vicinity of a facility.
- Alternative E-Development of additional ground water monitoring wells to further define subsurface conditions at the solid waste facilities.
- Alternative F-Investigating additional methods of densifying the waste leading to increased efficiencies and greater rate stability in the future.

Section 10

Moderate-Risk Waste

This section describes the regulatory framework for managing hazardous waste in the planning area. It also describes existing management practices for moderate-risk waste, and develops and evaluates five alternative management strategies for moderate-risk waste.

10.1 Hazardous Waste Regulation

An overview of the federal, state and local regulatory framework for managing hazardous waste is presented below. Federal and state regulations focus primarily on hazardous waste generated at rates exceeding 220 pounds per month. Local regulations focus on moderate-risk waste (MRW), which is hazardous waste generated by businesses at rates below 220 pounds per month and waste generated by households.

10.1.1 Federal Regulations

The primary federal legislation relating to hazardous waste are the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Other federal legislation such as the Universal Waste Rule and the Mercury-Containing and Rechargeable Battery Management Act establish rules for specific types of hazardous waste.

Resource Conservation and Recovery Act (42 U.S.C. s/s 6901 et seq.)

The Resource Conservation and Recovery Act (RCRA) establishes responsibility and authority for managing hazardous waste. Subtitle C of the law establishes requirements for generators, transporters, and operators of hazardous waste treatment, storage and disposal facilities. Hazardous wastes must be tracked from the time they are generated until the time they are disposed using a manifest system. Subtitle D of RCRA establishes minimum requirements for construction and operation of solid waste disposal facilities. It seeks to ensure that landfills receiving household hazardous waste and small quantity generator waste meet minimum design and construction standards. The Washington State Department of Ecology has been delegated the authority to enforce the provisions of RCRA.

Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. s/s 9601 et seq.)

CERCLA, also known as the Superfund act, provides the Environmental Protection Agency with the authority to clean up disposal sites contaminated with hazardous waste. The legislation enables the agency to identify responsible parties and assess liability for cleaning up individual sites. The Superfund Amendments and Reauthorization Act establishes requirements related to emergency response planning and community notification of chemical releases.

Enhancing Hazardous Materials Transportation Security (HM-232)

HM-232, which went into effect March 25, 2003, amended the hazardous materials transportation rules to require that persons who transport, or offer for transportation, certain types of hazardous materials develop and implement a security plan. This rule also requires that employees be provided with security awareness training. This rule applies to Island County's MRW facility due to the types and quantities of wastes collected and shipped. The intent of the security plan is to prevent theft of flammable or explosive materials that could be used in acts of terrorism.

10.1.2 State Regulations

Hazardous Waste Management Act (Chapter 70.105 RCW)

The Hazardous Waste Management Act establishes requirements for state and local hazardous waste management plans, rules for hazardous waste generation and handling, criteria for siting hazardous waste management facilities, and local zoning designations that permit hazardous waste management facilities. The Hazardous Waste Management Act also establishes waste management priorities for hazardous wastes. In order of decreasing priority, the management priorities are waste reduction; recycling; physical, chemical and biological treatment; incineration; solidification/stabilization; and landfilling.

Rules implementing the Hazardous Waste Management Act are codified in the Dangerous Waste Regulations (Chapter 173-303 WAC). This regulation defines dangerous waste materials and establishes minimum handling requirements. State rules specifically exclude household hazardous waste and small quantity generator wastes from the dangerous waste regulation. The Dangerous Waste Regulations have been amended several times over the years, most recently in 2005. The 2005 amendments allow mercury-containing equipment to be managed as a universal waste, requires that recyclers and used oil processors develop closure plans and meet financial responsibility requirements, and provide several other changes and updates.

Model Toxics Control Act (Chapter 173-340 WAC)

The Model Toxics Control Act assigns responsibilities and provides a funding source for cleaning up hazardous waste disposal sites in Washington. The act establishes state and local toxics control accounts as funding sources for hazardous waste related activities. The state account funds Ecology's solid and hazardous waste management planning activities, enforcement and technical assistance, remedial actions, public education and emergency response training. The local account provides grants to local governments for solid and hazardous waste programs including remedial actions.

Used Oil Recycling Act (Chapter 70-95I RCW)

The Used Oil Recycling Act requires local hazardous waste management plans to include plans for collecting used motor oil, enforcing sign and container ordinances, and conducting public education. Local governments are also required to submit annual reports identifying used motor oil collection sites and the quantity of used motor oil collected from households.

Solid Waste Management Act (Chapter 70.95 RCW)

The Solid Waste Management Act prohibits the disposal of automobile batteries and requires retail vendors to accept used batteries for recycling.

Solid Waste Handling Standards (Ch. 173-350 WAC)

The new Solid Waste Handling Standards, which became effective February 10, 2003, provide guidance on the design and operation of MRW facilities.

Mercury Education and Reduction Act (Chapter 70.95M RCW)

As of January 1, 2006, the Mercury Education and Reduction Act made it illegal to sell most items that contain mercury, including thermometers, manometers, toys, games and jewelry, in Washington State.

10.1.3 Local Regulations (Chapters 13.02A and 8.08B ICC)

Solid waste disposal is regulated under Chapter 13.02A of the Island County Code. The regulation prohibits the disposal of hazardous waste in Island County and provides penalties for noncompliance.

Moderate-risk waste is further regulated under the Solid Waste Regulation-Chapter 8.08B of the Island County Code. Moderate-risk waste must be disposed at a local moderate-risk waste handling facility or at a waste management facility approved by the Department of Ecology. The regulation states that moderate-risk waste shall not be disposed in a sewer system or an on-site sewer system, poured onto the ground or into a storm drain, disposed with municipal solid waste, buried or otherwise discarded. In addition, product labels must not be removed and the product must be stored in its original container. Finally, the product container must not be refilled unless the product label specifically recommends refilling.

10.2 Existing Moderate-Risk Waste Management Practices

Current management practices for moderate-risk waste generated within the planning area are summarized below.

10.2.1 Collection

Curbside collection service for used motor oil and lead-acid batteries are provided by the City of Oak Harbor as part of its residential recycling program.

Whidbey Recycling Services, a subsidiary of Waste Connections, Inc., attempts to remove household batteries and other household hazardous waste from the municipal solid waste stream through its mixed waste recycling operation.

Schuck's Auto Supply, 1379 Pioneer Way in Oak Harbor, provides drop-off collection service for used motor oil. Hours of operation are 8 a.m. to 9 p.m. Monday through Saturday and from 8

a.m. to 7 p.m. on Sundays. Wal-Mart and other businesses also collect used oil.

Drop-off collection services are provided for household hazardous waste at the Oak Harbor, Coupeville, Bayview and Camano solid waste facilities. The Oak Harbor, Bayview and Camano facilities are satellite collection facilities supported by the primary moderate-risk waste collection and processing facility at the Island County Solid Waste Complex. Household hazardous waste may be delivered to any of the facilities during normal operating hours, but large loads and SQG wastes must be delivered to the Coupeville facility.

Drop-off collection services for Small Quantity Generator waste are available at the Island County Solid Waste Complex. Advance notification of delivery and a scheduled appointment is requested to verify the generator status of the business or institution producing the waste.

10.2.2 Exchange

The moderate-risk waste collection and processing facility at the Island County Solid Waste Complex includes a materials exchange. Individuals having a use for specific products disposed through the collection system may request the product for their personal use. Exchange products typically include paint and paint-related products, cleaners, polishes and waxes. Toxics, corrosives and similar materials are not included in the exchange program.

10.2.3 Processing

With the exception of used motor oil and lead-acid batteries, all moderate-risk waste collected within the planning area is transported to the moderate-risk waste handling facility at the Island County Solid Waste Complex. The waste materials are sorted according to their hazard classification and packed into 55-gallon drums or one-yard gaylords for shipment. Paint, fuels, compressor oil and antifreeze are consolidated and transported in bulk form. Other materials are packed into drums or gaylords in their original containers. The drums are stored at the facility until truckload quantities are available for transport. Latex paint is solidified and disposed as solid waste.

10.2.4 Transport and Disposal

Moderate-risk waste collected at the drop-off facilities is managed as a hazardous waste. The waste materials are transported to a licensed hazardous waste treatment, storage and/or disposal facility. Hazardous waste treatment and disposal services are currently provided under a State of Washington service contract by Clean Harbors.

10.2.5 Household Hazardous Waste Education

Household hazardous waste management information is periodically included in the solid waste-related classroom presentations and smart shopping campaigns regularly conducted in various public locations. The current moderate-risk waste education program includes dissemination of printed information through local newspapers and mailings, information booths, presentations at public events and oral responses to telephone inquiries. The WSU Waste Wise Program assists with the information and education program. Information about hazardous waste disposal is also

shown on the county's website (www.islandcounty.net/publicworks/Solid%20Waste/index.htm).

10.2.6 Small Quantity Generator Education and Technical Assistance

Outreach and education for Small Quantity Generators (SQGs) is an ongoing activity. Technical and disposal assistance is provided on an as-requested basis. Every few years an SQG Coordinator is hired to provide additional outreach and to publicize the availability of disposal services.

Compliance issues are handled by Island County Public Health, who responds to complaints and other problems as these are identified. Public Health receives grant funds specifically for this purpose.

10.2.7 Cooperative Agreement with NAS Whidbey Island

Island County and NASWI have an agreement that allows military personnel and their dependents residing in government quarters at NASWI to deliver household hazardous waste to County collection stations. In 2005, NASWI's private contractor (American Eagle, Inc.) assumed financial responsibility this program. The agreement is ongoing.

10.3 Planning Issues

Planning issues related to the moderate-risk waste program are discussed below.

10.3.1 Required Elements for Moderate-Risk Waste Management Programs

There are five specific components required for local moderate-risk waste management programs, two that address educational efforts and three that help fulfill the mandate to "prepare a program to manage moderate-risk waste" (RCW 70.105.220(I)(a)):

- A public education program;
- A technical assistance program for businesses;
- A plan or program to collect household hazardous wastes and used oil;
- A plan or program to collect business wastes; and
- A plan or program to ensure compliance by small quantity generators and others.

10.3.2 Measuring the Success of Moderate-Risk Waste Programs

The number of participants or the quantity of moderate-risk waste materials collected are two possible measures of the success of a moderate-risk waste program. Program success could also be measured by the number of individuals making conscious decisions to purchase products that do not contain hazardous materials or the number of individuals who purchase only as much of a product containing hazardous ingredients to satisfy their immediate need. These actions avoid the cost of handling residues and surplus materials as hazardous wastes, and avoid the potential health and environmental risks associated with such products, but unfortunately these actions are more difficult or even impossible to measure.

10.3.3 Household Hazardous Waste Collection Program

Household hazardous waste collection has become an integral part of the solid waste collection facilities in the planning area. Between one and six percent of the arrivals at the drop box and transfer stations participate in the program (see the last row of Table 10-1). Participation characteristics for the moderate-risk waste collection program are summarized in Table 10-1.

Table 10-1
Summary of Customer Participation in Moderate-Risk Waste Collection Program

Alternative	Collection Facility			
	Oak Harbor	Coupeville	Bayview	Camano
Number of Moderate-Risk Waste Program Participants in 2005	370	1,065	670	558
Amount of Moderate-Risk Waste, tons in 2005	31.2	84.7	57.9	49.0
Percent of Total Arriving Vehicles in 2005	5.4	1.4	3.3	1.2

10.3.4 Washington State Hazardous Waste Management Plan and Solid Waste Management Plan

Reducing small-volume hazardous materials and waste is one of the five key initiatives in the Beyond Waste plan. The goal of that initiative is to “accelerate progress toward eliminating the risks associated with products containing hazardous substances.” The initiative specifically targets hazardous wastes from households and small quantities from businesses. The Beyond Waste plan makes ten recommendations to achieve its goal:

1. Prioritize wastes to pursue.
2. Reduce threats from mercury.
3. Reduce threats from polybrominated diphenyl ethers (PBDEs).
4. Develop an electronics product stewardship infrastructure.
5. Ensure proper use of pesticides, including effective alternatives.
6. Reduce and manage all architectural paint wastes.
7. Lead by example in state government.
8. Ensure MRW and hazardous substances are managed according to hazards, toxicity and risk.
9. Fully implement local hazardous waste plans.
10. Ensure facilities handling MRW are in compliance with environmental laws and regulations.

10.4 Alternative Management Strategies

Five alternative management strategies for moderate-risk waste are discussed below.

10.4.1 Moderate-Risk Waste Alternative A-Public Education for Household Hazardous Waste

Household hazardous waste education programs focus on identifying household products that contain hazardous ingredients, considering safer alternatives and explaining how to dispose

unwanted products that contain hazardous substances. Rather than continue an independent education program for moderate-risk waste, Alternative A attempts to incorporate the message into existing programs that benefit from the household hazardous waste program. Ongoing programs that have common objectives include local storm water programs, local ground water programs, municipal wastewater treatment programs, and on-site sewage system programs. By coordinating the message with other resource protection and waste management programs, the message will be repeated and attention will be focused on the multiple benefits of the higher-priority management practices. The estimated annual cost of the household hazardous waste education program is over \$10,000.

10.4.2 Moderate-Risk Waste Alternative B-Education and Technical Assistance for Small Quantity Generators

Moderate-Risk Waste Alternative B would continue the outreach activities for the small quantity generators. This outreach program periodically attempts to identify new local small quantity waste generators, confirm that they understand their management responsibilities for moderate-risk waste, and promote the higher-priority management strategies. In addition, assistance would be provided for the routine collection and management of small quantity waste material through both commercial collection services and the Coupeville drop-off facility. A concept-level annual operating cost estimate for Alternative B is presented in Table 10-2. Annual costs are estimated at \$36,000.

Table 10-2
Concept-Level Annual Operating Cost Estimate for Moderate-Risk
Waste Alternative B-Education and Technical Assistance for Small Quantity Generators

	Quantity	Unit	Unit Cost, \$	Amount
Labor	1,040	hours	24	25,000
Vehicle	5,000	miles	0.38	2,000
Office Expense	20	percent		5,000
Printing	1	lump sum	4,000	4,000
Total				36,000

10.4.3 Moderate-Risk Waste Alternative C-Retail Return for Paint Products

The quantity of solvent-based paint and related products is second only to used motor oil in the household hazardous waste stream. These materials represent almost half of the household hazardous waste stream if used motor oil is excluded.

Moderate-Risk Waste Alternative C would attempt to shift the responsibility for managing paint waste from Island County to retailers who sell paint products. Retailers would be encouraged to accept leftover quantities of solvent-based paint products from their customers. The retailers would become household hazardous waste collection facilities for paint and paint-related products. In addition to increasing the number of collection facilities, the retailers could directly affect waste paint generation by promoting water-based paints and selling only the amount of solvent-based product needed for a specific project. Management costs for these waste materials would be shifted from the solid waste program to the retail industry.

10.4.4 Moderate-Risk Waste Alternative D-Regulation

When the moderate-risk waste management program was established in the early 1990s, a decision was made to emphasize education and technical assistance rather than regulatory compliance. Moderate-Risk Waste Alternative D would add a regulatory component to the moderate-risk waste program.

The regulatory component would include a variety of surveillance and control activities. Minimum handling requirements would be established for the generation, storage, and disposal of small quantity generator waste. A compliance-monitoring program providing on-site inspection of small quantity generators every three years would be established. Records identifying the disposal locations for moderate-risk waste would be maintained by waste generators. Finally, civil penalties for violating the minimum handling requirements would be authorized. A concept-level operating cost estimate for Alternative D is presented in Table 10-3. Annual operating costs are estimated at \$32,000.

Table 10-3
Concept-Level Annual Operating Cost Estimate for Moderate-Risk
Waste Alternative D-Regulatory Emphasis

	Quantity	Unit	Unit Cost, \$	Amount
Labor	1,040	hours	24	25,000
Vehicle	6,000	miles	0.38	2,000
Office Expense	20	percent		<u>5,000</u>
Total				32,000

10.4.5 Moderate-Risk Waste Alternative E-Establish User Fees for Household Hazardous Waste Services

Household hazardous waste services cost the Solid Waste Division \$181,200 in 2005. There are no direct charges for these services. Instead, household hazardous waste costs are recovered through a surcharge on solid waste tipping fees. In 2005, household hazardous waste expenditures amounted to \$3.52 per ton of municipal solid waste, or an average of \$53 per hazardous waste participant.

Moderate-Risk Waste Alternative E would establish a nominal user fee for household hazardous waste services of \$10 for each participant. The fee would acknowledge that there are costs associated with managing hazardous waste and perhaps encourage waste reduction.

10.5 Evaluation of Alternative Strategies

The alternative moderate-risk waste management strategies are compared with respect to three evaluation criteria below. The criteria include consistency with the planning objectives, consistency with the priority waste management practices and costs.

10.5.1 Consistency with Planning Objectives

All of the alternative moderate-risk waste management strategies are consistent with the planning

objectives. Both Alternative A-Public Education for Household Hazardous Waste and Alternative B-Education and Technical Assistance for Small Quantity Generators include waste reduction as a fundamental waste management strategy. Alternative C-Retail Return or Paint Products is consistent with the objectives to encourage public-private partnerships for waste reduction and recycling needs and to encourage those who sell and use products containing hazardous ingredients to accept responsibility for minimizing risks to public health and the environment. Alternative D-Regulation is consistent with the planning objective to ensure compliance with state and local solid waste and moderate-risk waste handling regulations. Finally, Alternative E-User Fees for Household Hazardous Waste Services is also consistent with the planning objective to encourage those who sell and use products containing hazardous ingredients to accept responsibility for minimizing risks to public health and the environment.

10.5.2 Consistency with Priority Management Practices

The highest priority waste management strategy is waste reduction or avoiding the production of moderate-risk waste. The education-related alternatives, Alternatives A and B, both focus on waste reduction. Alternative C may also promote waste reduction by encouraging retail operations to sell only the quantity of product need for a particular project. Alternative D focuses on handling waste materials rather than preventing their production. Alternative E could be a deterrent to participation in the household hazardous waste program and may increase improper disposal of moderate-risk waste.

10.5.3 Costs

Alternative A-Public Education for Household Hazardous Waste, is estimated to cost \$10,000 annually. Alternative B-Education and Technical Assistance for Small Quantity Generators, is estimated to cost \$36,000 per year but doesn't need to be conducted every year. Alternative C-Retail Return for Paint Products, could shift some costs associated with the collection and disposal of paint and paint-related products from the public sector to the retail stores. Alternative D-Regulation, would cost an estimated \$32,000 annually. Finally, Alternative E-User Fees for Household Hazardous Waste Services would shift 20 percent of the program costs from tipping fees to direct user fees.

10.5.4 Rating of Alternatives

The alternative moderate-risk waste management strategies are compared with respect to the evaluation criteria in Table 10-4. Alternatives A and B are recommended to be pursued further (see Section 14.6).

Table 10-4
Summary Comparison of Alternative Moderate-Risk Waste Management Strategies

	Alternative	Consistency with Planning Objectives	Rating	
			Consistency with Management Priorities	Costs
A	Public Education for Household Hazardous Waste	H	H	M
B	Education and Technical Assistance for Small Quantity Generators	H	H	M
C	Retail Return for Paint Products	H	M	M
D	Regulation	H	M	M
E	Establish User Fees for Household Hazardous Waste Services	H	L	M
		H - High	M - Medium	L - Low

Section 11

Other Solid Waste

This section discusses management practices for other solid materials including inert and demolition waste, land clearing debris, appliances, tires, auto bodies, biomedical waste, asbestos and petroleum contaminated soils.

11.1 Existing Management Practices

Existing management practices for the other solid waste materials are discussed below.

11.1.1 Inert and Demolition Waste

Loads of inert and demolition waste are accepted for disposal as solid waste, but at a higher rate, at the Island County Solid Waste Complex. The Island County Solid Waste Division is responsible for operation and maintenance of this transfer facility.

11.1.2 Land Clearing Debris

Land clearing debris is sometimes burned where it is harvested although on-site grinding and spreading is becoming more common. Some service providers limit the dimensions of waste materials and/or assess minimum charges for mobilization of equipment. Alternatively, land-clearing debris may be transported to a regional wood waste composting or disposal facility. Management of land clearing debris is the responsibility of the waste generator.

11.1.3 Appliances

Appliances are recycled for ferrous scrap metal. They are accepted at Christian's Auto and Metals Recycling and Island Recycling as well as the County's Coupeville and Camano transfer stations. If present, refrigerants are recovered before scrap processing.

11.1.4 Tires

Tires are collected at the Island County Solid Waste Complex, the Camano Transfer Station, and Island Recycling from residential sources only, and at Christian's Auto and Metal Recycling and Oak Harbor Auto Wrecking. The tires are transported out of Island County for recycling or disposal. A maximum of 800 tires may be stockpiled at each location.

11.1.5 Auto Bodies

Auto bodies are another source of ferrous scrap metal. Christian's Auto and Metal Recycling, Oak Harbor Auto Wrecking and Island Recycling provide collection and processing services for auto bodies. After fluids are removed, the auto bodies are crushed and transported out of Island County for recycling.

11.1.6 Biomedical Waste

State law (RCW 70.95K) defines biomedical wastes to include:

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, inoculate and mix cultures.

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

Pathological waste: human source biopsy materials, tissues, and anatomical parts that 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.

Biomedical waste generators are required to prepare and maintain a biomedical waste management plan. They are also required to meet minimum standards for storage and treatment of biomedical waste. The minimum handling standards are established in Section 8.08B.370 of the Island County Code and summarized below.

Every biomedical waste generator and biomedical waste storage and treatment facility operator is required to prepare a written plan for biomedical waste management. The plan must identify the types and quantities of biomedical waste and handling procedures for segregation, containment, transport, treatment, monitoring and disposal. The management plan must also include staff training procedures and contingency planning and identify specific individuals responsible for biomedical waste handling. The plan must be approved by the chief executive of the generating, storage or treatment facility and must be available for inspection at the request of the local health officer.

Biomedical waste must be segregated from other waste materials. Biomedical waste, other than sharps, must be enclosed in a red plastic bag and placed in a labeled, biomedical waste storage container. Sharps must be placed in a leak proof, puncture resistant, labeled container secured

with a lid. Biomedical waste may be stored up to eight days at temperatures exceeding 32 degrees F and up to 30 days at temperatures below 32 degrees F.

Biomedical waste must be treated by an approved method prior to disposal. Approved treatment methods include steam sterilization, incineration and others as approved by the local health officer.

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

11.1.7 Asbestos

Asbestos waste is not accepted at the County solid waste facilities. A list of licensed asbestos contractors is provided by the County upon request.

11.1.8 Agricultural Waste

Agricultural waste generators typically manage waste on-site for beneficial purposes. The Whidbey Island Conservation District, WSU Extension Island County, and the County Public Health and Planning Departments provide technical assistance to prevent and abate nuisance conditions. The County solid waste facilities accept and dispose of noxious weeds at no charge. An agricultural plastic recycling program in the region is being coordinated by RE Sources (Bellingham). The Department of Agriculture collects hazardous agricultural chemicals periodically.

11.1.9 Petroleum Contaminated Soils

Petroleum contaminated soils are soils containing fuel oil, gasoline or other volatile hydrocarbons in concentrations below dangerous waste levels but greater than cleanup levels established by the Department of Ecology. Petroleum contaminated soils may be disposed in an approved landfill or treated by a variety of processes that remove or destroy the contamination. Treatment processes include aeration, bioremediation, thermal stripping and incineration. Small amounts can be disposed as solid waste.

Island County maintains a treatment site for petroleum contaminated soils from county facilities only.

11.1.10 Pharmaceutical Wastes

There is a growing body of evidence for problems with the current practices of disposing of surplus and outdated medicines and other pharmaceuticals. These chemicals are showing up as contaminants in ground and surface waters. Several are only partially or not at all broken down in wastewater treatment plants, hence people are currently being encouraged to dispose of these in solid waste and not flush them into the wastewater system. This leads to other concerns, and so many people are looking into alternative collection programs.

11.1.11 Electronic Wastes (E-Waste)

The new rules requiring manufacturers and retailers of electronic goods to offer a program to take back obsolete equipment will become effective January 1, 2009. It would be beneficial if Island County could institute a collection program before that date. At a minimum, County staff should monitor the progress made towards implementing this new requirement and consider options on how local programs could be integrated with the new system.

11.2 Planning Issues

Planning issues relating to inert and demolition waste, land clearing debris, petroleum contaminated soils, and disaster debris are discussed below.

11.2.1 Inert and Demolition Waste

Inert wastes are those wastes that meet the criteria for inert wastes, including (by definition, see WAC 173-350) cured concrete, asphalt, brick, masonry, ceramics, glass, stainless steel and aluminum. Demolition waste is defined as solid waste resulting from the razing of buildings, roads and other man-made structures. These wastes used to be co-managed, but the new Solid Waste Handling Standards adopted by Ecology (Ch. 173-350 WAC) has changed this.

Inert waste disposal facilities are subject to less stringent requirements than municipal solid waste disposal facilities under the provisions of Chapter 173-350-410 of the Washington Administrative Code (WAC). Facility standards for inert waste landfills require owners and operators to:

- Maintain daily records of the weights or volume of materials accepted;
- Control dust and manage surface water run-on and run-off;
- Implement a program to detect and prevent non-inert waste disposal;
- At closure, level the wastes and fill all voids;
- Obtain a solid waste operating permit from the local health jurisdiction and record the disposal activity with the County auditor (unless the total capacity of the site is less than 250 cubic yards);
- Provide an annual report; and
- Prevent unauthorized access.

Demolition waste has come under increased scrutiny recently due to the hazardous or toxic materials that are sometimes present in this waste stream. These wastes potentially include wood treated with arsenic or pentachlorophenol, paints that contain lead and other toxins, asbestos in various forms, batteries and thermostats that contain mercury, and many other materials. Property owners and contractors are responsible for identifying and properly disposing of any hazardous materials present in buildings or other structures that will be demolished.

The wood waste portion of demolition and construction wastes, however, can be diverted to a beneficial use (energy recovery) and is currently being collected separately at the Island County Solid Waste Complex for this purpose (see also Sections 6.1.1 and 6.4.7).

11.2.2 Ban on Open Burning of Land Clearing Debris

Open burning of land clearing debris is permitted by the Clean Air Agency outside designated urban growth areas provided an alternative management practice that costs less than \$8.50 per cubic yard is not available (although this rule is under review by the Clean Air Agency). Open burning is prohibited under current air pollution regulations within the City of Oak Harbor urban growth area and in the city limits and urban growth areas of the City of Langley and Town of Coupeville (as of January 1, 2007). In areas where burning of land clearing debris is allowed, a permit is required from the Northwest Clean Air Agency.

11.2.3 Biomedical Wastes

Some sources of biomedical wastes, including dentists, veterinarians, farmers and ranchers, and residents, may not always dispose of biomedical wastes properly. There is not a clear estimate of the number of syringes and other biomedical wastes that may be improperly disposed locally, but haulers in other areas often report seeing syringes sticking out of garbage bags. On a national level, it is estimated that three to four billion injections are administered outside of traditional health care settings. Approximately two-thirds of this amount, or about two billion per year, are estimated to be administered by individuals attending to personal needs. This number is expected to increase due to an aging population and additional medications that have recently become available for home use (for HIV, arthritis, osteoporosis and psoriasis).

11.2.4 Petroleum Contaminated Soils

Petroleum contaminated soils (PCS) may be treated by several processes many of which include aeration. Aeration of the soils during treatment exhausts volatile organic compounds including potential toxic air pollutants such as benzene into the atmosphere. Emissions of volatile organic compounds are regulated under Section 300 of the Northwest Clean Air Agency regulations. Emissions greater than two tons per year of volatile organics require completion of a "Notice of Construction and Application for Approval" and agency review as a new source of air pollution. Toxic air pollutants such as benzene are regulated under Chapter 173-460 of the Washington Administrative Code. Air pollution control requirements are based on emission quantities of specific toxic constituents. Piles and most other treatment processes for PCS must be permitted by Public Health.

11.2.5 Disaster Debris

Natural disasters including windstorms, floods, earthquakes, tsunamis and fires can generate large quantities of waste materials. Other disasters such as oil spills, boat groundings, and airplane crashes also generate waste requiring special handling. Managing waste materials in a timely fashion is critical for disaster recovery operations.

Disaster debris generation in the planning area presents unique problems because local disposal facilities are limited. The municipal solid waste management system cannot be expected to handle large quantities of disaster debris. Interim storage and staging areas are needed to facilitate recovery operations.

11.3 Alternative Management Strategies

Contingent management strategies for demolition waste, disaster debris and special wastes are discussed below.

11.3.1 Other Solid Waste Alternative A-Investigate Diversion Options for Demolition Waste

Because some types of demolition wastes have the potential to damage waste compacting equipment, it is necessary to handle it separately from municipal solid waste and hence at a higher cost to the customer. In addition, this waste often consists of materials that potentially could be recycled or diverted to a beneficial use, and would be relatively easy to segregate for this purpose. This alternative would explore diversion programs (segregated collection and/or new markets or processing methods). A part-time staffperson could be hired temporarily, or periodically, to conduct these activities. A concept-level operating cost estimate for Alternative A is presented in Table 11-1. Annual operating costs are estimated at \$32,000.

Table 11-1
Concept-Level Annual Operating Cost Estimate for Other Solid
Waste Alternative A-Diversion Options for Demolition Wastes

	Quantity	Unit	Unit Cost, \$	Amount
Labor	1,040	hours	24	25,000
Vehicle	6,000	miles	0.38	2,000
Office Expense	20	percent		5,000
Total				32,000

11.3.2 Other Solid Waste Alternative B-Adopt Contingent Management Strategy for Disaster Debris

Windstorms may leave behind waste consisting of destroyed vegetation, damaged buildings and personal property. Floods create mud, sediment, sandbags and materials from damaged and dismantled houses. Earthquakes generate damaged building materials, personal property and sediment from landslides. Fires generate damaged building materials and charred waste. Oil spills generate petroleum contaminated absorbent materials and dead animals. Boat groundings create fuel spills and wastes that can include batteries, refrigerants and other materials depending on the contents of the boat. Finally, airplane accidents produce materials that must be secured for analysis by incident investigators before being disposed.

Property owned by Island County was inventoried and evaluated for use as temporary storage and staging areas for disaster debris. The location of the alternative sites is shown in Figure 11-1. Characteristics of each alternative site are summarized in Table 11-2.

To the extent possible, the various types of disaster debris should remain separated for management purposes. Separation allows emergency managers to focus first on waste materials that pose an immediate threat to public health and the environment such as hazardous waste. It also provides waste managers the ability to use multiple management strategies such as reuse and

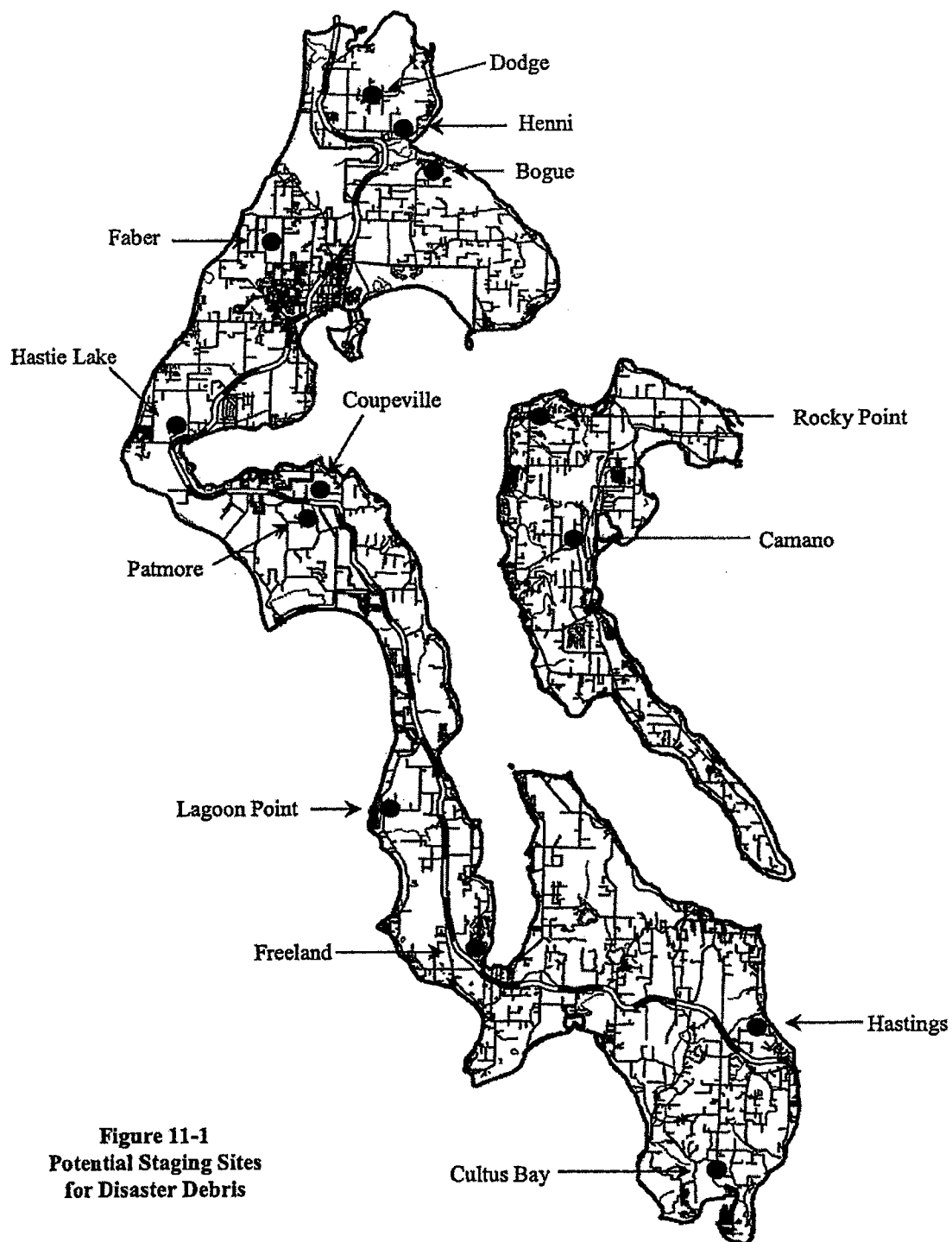


Table 11-2
Characteristics of Alternative Disaster Debris Storage and Staging Sites

Name	Total Area, Acres	Cleared Area, Acres	Current Use	Zoning
Dodge	20	7	Slash and Excavation Depository	Rural Residential
Bogue	17	7	Excavation Depository	Forest Management
Faber	4	3	Excavation Depository	Rural Residential
Hastie Lake	15	5	Excavation Depository	Rural Residential
Henni	39	4	Gravel Excavation	Forest Management Rural Residential
Coupeville	20	4	Solid Waste Management Facility	Rural Residential
Patmore	44	12	Excavation Depository	Rural Residential
Lagoon Point	22	2	Gravel Excavation/Screening	Forest Management
Freeland	17	3	Recycle Center, Wood Chip Storage	Rural Residential
Hastings	51	3	Gravel Excavation, Evacuation, Depository	Rural, Rural Residential
Cultus Bay	37	5	Gravel Excavation, Evacuation, Depository	Forest Management
Rocky Point	26	2	Gravel Excavation	Rural Residential
Camano	15	3	Closed Waste Landfill	Rural Residential

recycling. Management recommendations for the various types of disaster debris are summarized in Table 11-3. No secure sites for storing crash debris for accident investigations were identified. Emergency services managers will need to rely on local (Naval Air Station Whidbey Island) or neighboring jurisdictions for secure storage of these materials.

Table 11-3
Management Recommendations for Disaster Debris

	Reuse	Recycling	Disposal as Inert Waste	New or Dedicated Site	Disposal in Municipal Solid Waste	Burning	Container Storage-Regional Disposal
Destroyed Vegetation		•		O		O	
Damaged Building Materials		O	O	O	•		
Personal Property					•		
Mud, Sediments, Sand Bags	•		O	O			
Charred Materials				O	•		
Petroleum Contaminated Material				O		O	•
Dead Animals				O	•		

• Primary

O Secondary

11.3.3 Other Solid Waste Alternative C-Alternative Collection Programs for Special Wastes

Collection programs may be required or desired in the future for materials that cannot be fully anticipated at this time, although examples could include pharmaceuticals, e-waste and other

items. It may also be determined that additional efforts need to be undertaken for existing waste streams, such as biomedical or other wastes. As these needs arise or are identified, options should be evaluated and feasible cost-effective solutions implemented as necessary. Possible steps that could be taken include:

Increased education: additional education for generators who are the sources of the waste stream could be conducted to promote safe handling and disposal practices.

Collection programs: collection programs could be developed or expanded to include additional materials or sources.

Conduct a waste generator survey: the Solid Waste Division or Public Health could conduct waste generator surveys to gather more information about types and amounts of wastes, barriers to proper handling and disposal practices, and other factors. A survey may be a necessary first step to developing new programs.

Increase enforcement: increased enforcement activities and larger penalties could be implemented.

Other steps: other steps not anticipated at this time but appropriate to the waste could also be considered.

11.4 Evaluation of Alternative Strategies

All three of these alternatives are recommended to be pursued (see Section 14.7), as the need arises:

- Additional diversion options for disaster debris will be evaluated at a later date as work on those options proceeds.
- The contingent disaster debris storage and staging sites will become available upon declaration of a local emergency.
- Alternative collection programs for special wastes will be developed and evaluated at a later date as program needs arise.

Section 12

Administration

This section describes the current administrative elements of the solid waste program, discusses related planning issues and develops and evaluates two alternative administrative strategies. Chapter 13.02A of the Island County Code establishes solid waste management as a County public works operation.

12.1 Existing Program Elements

The administrative structure, organization and financing for the solid waste program are discussed below.

12.1.1 Administrative Structure

Washington State

Chapter 70.95 of the Revised Code of Washington (RCW) assigns primary responsibility for solid waste management to local government. The legislation establishes statewide priorities for managing solid waste and authorizes the Department of Ecology to promulgate regulations for solid waste handling. The primary state solid waste regulations are included in Chapter 173-350 of the Washington Administrative Code as the Solid Waste Handling Standards.

Washington State also provides financial assistance through the coordinated prevention grant (CPG) program. The program provides grants for eligible projects and programs that conform to recommendations included in local solid and hazardous waste management plans. Funding is also provided to local health jurisdictions for solid waste surveillance and control programs. These grants are authorized by RCW 70.105D.070, the Toxics Control Act, and the funds for these grants and for several state responsibilities are derived primarily from fees “on the privilege of possession of hazardous substances in this state” (RCW 82.21.030).

The Washington Utilities and Transportation Commission (UTC) regulates private garbage collection companies. The UTC oversees waste collection certificates (franchises) and approves rates for garbage collection service in unincorporated jurisdictions.

Island County

Counties may establish or acquire solid waste disposal sites and enforce rules and regulations for their use. Counties have the authority to designate which disposal facilities may be used by individuals, municipalities and commercial haulers and to determine the types of waste accepted at each disposal site. Waste generated within Island County must be disposed at County-designated facilities unless an alternative disposal site is authorized by the solid waste management plan or specifically approved by County ordinance or interlocal agreement.

Any municipality disposing solid waste at a County facility must execute an interlocal agreement

with the County designating the County as the operating authority for the solid waste disposal system. Island County has authority to prepare the solid waste management plan for unincorporated areas and for the three municipalities that have designated the County as the solid waste operating authority through an interlocal agreement.

Island County Board of Health

The Board of Health has adopted standards for the storage, collection, transportation, treatment, utilization, processing and disposal of solid waste. Island County Public Health administers a permitting process for solid waste handling facilities. All handling facilities must develop and follow an operating plan approved by Public Health. All permitted facilities are inspected on a periodic basis for conformance with solid waste regulations. Public Health collects annual permit fees for solid waste handling facilities and receives a portion of the tipping fee charged at County solid waste facilities.

Municipalities

Three municipalities currently participate in the solid waste program through interlocal agreements: the Cities of Oak Harbor and Langley, and the Town of Coupeville. Municipalities may provide or contract for the collection of solid waste generated within their jurisdiction. The three municipalities have designated Island County as the operating authority for the solid waste disposal system.

Island County Solid Waste Advisory Committee

The Solid Waste Advisory Committee (SWAC) provides Island County with advice on solid waste management issues. The committee participates in the development of the solid waste management plan, assists in the development of policies and programs for solid waste management, and comments on proposed resolutions and ordinances prior to their adoption. Minutes are kept of all committee meetings. Committee recommendations are provided to the Board of Island County Commissioners.

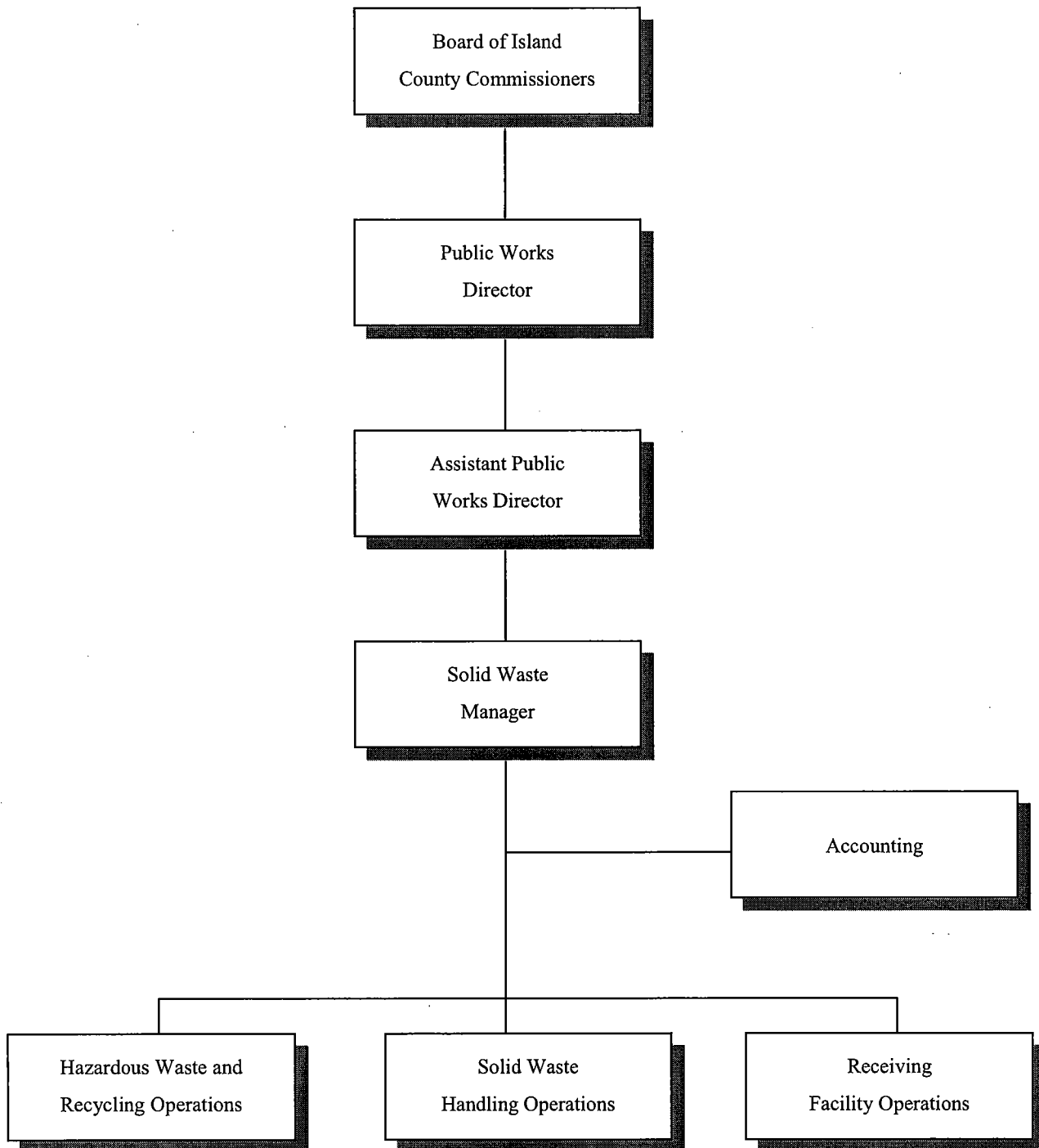
12.1.2 Solid Waste Division Organization

The Island County Solid Waste Division is a division of the County's Public Works Department. The Solid Waste Division is divided into functional elements for accounting, hazardous waste and recycling operations, solid waste handling operations and receiving facility operations as shown in Figure 12-1. The Solid Waste Division manager reports to the assistant public works director.

12.1.3 Solid Waste Program Financing

The Solid Waste Division follows generally accepted accounting principles for enterprise funds. All solid waste fees, investment earnings and grant reimbursements are deposited into the solid waste fund. All solid waste program expenditures are paid from the solid waste fund. Island County policy requires that solid waste program revenues be used to fund program expenditures. Current disposal rates charged at the solid waste receiving facilities are shown in a previous

Figure 12-1
Island County Solid Waste Program Organization



chapter (see Table 8-1). Disposal rates are uniform throughout the planning jurisdiction.

12.2 Planning Issues

Planning issues relating to the solid waste fund's working capital balance and minimum level of service at the receiving stations are discussed below.

12.2.1 Working Capital Balance

The Solid Waste Division maintains working capital for capital expenditures, post-closure maintenance of the former landfills, and contingencies. Working capital has been used to fund major capital improvement projects including closure of the Coupeville Landfill, construction of the Island County Solid Waste Complex, upgrades of other solid waste facilities, and environmental systems. Maintenance of the working capital balance has enabled the Solid Waste Division to avoid debt and debt service payments. Since 1990, the target working capital balance has been approximately \$1,500,000, including about \$1,400,000 for capital expenditures and contingencies and \$100,000 for post-closure maintenance of the former Coupeville Landfill. The actual working capital balance at the end of 2006 was approximately \$2,000,000.

Capital expenditures include land purchases, facility improvements and purchases of operating equipment. Capital expenditures are typically identified in the solid waste management plan or the annual operating budget.

Landfill post-closure maintenance costs are primarily related to the former Coupeville Landfill. Post-closure maintenance costs include routine maintenance of the cover system and environmental control systems together with sampling, analysis and reporting as required by state regulations. Post-closure maintenance will continue through the year 2026. In 2005, post-closure maintenance expenditures were over \$100,000, not including the \$1.2 million upgrade that was completed in 2006.

Solid waste program contingencies are unanticipated projects and activities that are not identified in the solid waste management plan. An example of a contingency is a change in regulatory requirements for an operating facility. Perhaps the largest potential contingency for the solid waste program would be remedial action at one of the five closed landfill sites for which the county is responsible. Remedial action at potentially contaminated sites includes preliminary investigations, feasibility studies, and cleanup activities such as treatment, disposal and monitoring.

The Solid Waste Division periodically evaluates insurance protection for environmental liability to partially offset self-insurance costs. To date, the quoted premiums have significantly exceeded the value of coverage due to the exclusions involved.

12.2.2 Minimum Service Fee

The minimum fee for solid waste disposal at a County receiving facility increased to \$10.00 beginning in early 2007, which includes the 3.6 percent state utility tax, for a single can or bundle of waste materials not exceeding 40 pounds. Additional cans or bundles are \$3.00.

The average weight of waste materials received per customer is just over 100 pounds. In 2005, the average weights were 115 pounds and 132 pounds, respectively, at the Oak Harbor and Bayview drop box facilities (see Tables 8-2 and 8-3). The average weight represents three or four cans or bundles of waste materials.

12.3 Alternative Administrative Strategies

Two administrative management strategies are discussed below.

12.3.1 Administrative Alternative A-Maintain Target Balance for Working Capital

Administrative Alternative A would maintain the target balance for working capital. The target balance should be the sum of three elements:

- The present value of projected 6-year capital improvements;
- The present value of a portion of the post-closure maintenance costs at the Coupeville Landfill through 2026; and
- An environmental degradation contingency fund or pollution liability insurance coverage.

The target balance could be evaluated every three years in conjunction with a solid waste rate study and potentially revised at that time. The working capital balance would be invested prudently. All investment income derived from the working capital balance would accrue to the solid waste fund.

12.3.2 Administrative Alternative B-Solid Waste System Operational Assessment and Benchmarking Study

Administrative Alternative B would address the growth that is occurring in the County and the City of Oak Harbor, where mutually beneficial economies may be gained by alternative collection, hauling, or transportation strategies. In the near future, cooperative arrangements for these basic services as well as special material handling/processing (glass, for example) should be developed.

The County is proposing a Solid Waste System Operational Assessment and Benchmarking Study in 2007 - 2008 to identify and develop system wide upgrades for the 6 to 20 year time frame. A preliminary scope has been developed. The study will involve the Cities of Oak Harbor, Coupeville and Langley, NASWI, certificated (franchised) haulers, and other stakeholders.

System components such as additional transfer stations and expanded or new processing facilities will be recommended together with possible financing arrangements. A certain degree of redundancy is essential in the future with recognition that all Island County residents will continue to share in the cost of closed facility maintenance, moderate-risk waste management, environmental responsibilities, education outreach, and shared cost for seven-day per week system access.

The cost for this alternative is \$50,000.

12.4 Evaluation of Alternative Strategies

The alternative administrative strategies are compared with respect to two evaluation criteria below: cost control and long-term rate stability.

12.4.1 Cost Control

Administrative Alternative A retains and/or increases working capital for capital improvements, post-closure care of the Coupeville Landfill and environmental contingencies. Funding these activities with working capital rather than operating revenues has no effect on their costs.

Administrative Alternative B promotes cost control measures by examining options for more cost-effective methods of solid waste handling.

12.4.2 Long-Term Rate Stability

Solid waste services are essential for protection of public health and the environment. Services must be reasonably available for all waste generators and each waste generator must contribute to the cost of providing the services.

Administrative Alternative A dedicates a portion of excess working capital to future maintenance and capital expenditures. Funding post-closure care with working capital promotes rate stability by discounting future operating costs.

Administrative Alternative B promotes long-term rate stability by improving services in a cost-effective manner.

12.4.3 Rating of Alternatives

The alternative administrative strategies are compared with respect to the evaluation criteria in Table 12-1. Based on the evaluation of these alternatives, both alternatives are recommended to be pursued (see Section 14.8).

Table 12-1 Summary Comparison of Alternative Administrative Strategies		
Alternative	Rating	
	Cost Control	Long-Term Rate Stability
A Maintain/Increase Target Balance for Working Capital	M	H
B Solid Waste System Operational Assessment and Benchmarking Study	H	H
	H - High	M - Medium
		L - Low

Section 13 Regulation

This section discusses the surveillance and control program for solid waste handling activities in the planning area and conceptualizes and evaluates two alternative regulatory strategies.

13.1 Existing Program Elements

Solid waste handling practices within the planning area are controlled under regulations administered by Island County Public Health. Public Health enforces the Island County Solid Waste Regulations (Chapter 8.08B of the Island County Code), the Washington State Solid Waste Handling Standards (WAC 173-350) and other state solid waste laws and regulations.

13.1.1 Solid Waste Permits

Public Health exercises its authority for regulating solid waste handling facilities and collection service providers through a permitting system. A list of solid waste handling facility permits valid in January 2006 is presented in Table 13-1.

13.1.2 Air Quality Permits

The Northwest Clean Air Agency regulates mobile and stationary sources of air pollutants in Island County. The authority issues an annual permit for gas emissions at the Coupeville Landfill.

The Fire Marshall is responsible for enforcing regulations prohibiting the backyard burning of municipal solid waste and other outdoor burning problems.

13.1.3 Complaints

Public Health staff respond to complaints involving violations of solid waste regulations, including improper storage and illegal dumping. A summary of the number and nature of complaints investigated in 2004, 2005 and 2006 is presented in Table 13-2.

13.2 Planning Issues

Planning issues associated with illegal dumping and enforcement are discussed below.

13.2.1 Illegal Dumping

Litter and illegal dumping of waste materials is a negative influence on communities and presents real threats to public health and the environment. Tolerating litter and illegal dumping signals community acceptance while timely clean up of illegal disposal sites tends to discourage additional waste storage and disposal problems.

Table 13-1
Active Solid Waste Permits Issued by Island County Public Health
(January 2006)

	Composting Facility	Material Recovery Facility	Transfer Station	Storage or Treatment Piles	Waste Storage Facility	Moderate-Risk Waste Facility	Land Application Facility	Surface Impoundment or Tank	Collection and Transport Vehicles
Christian's Towing, Recycling & Storage 615 Christian Road Oak Harbor		•			•	Limited			
City of Oak Harbor 100 SE City Beach Street Oak Harbor			Permit Exempt	•					•
F-1 Sand and Gravel 194 Pit Road Oak Harbor				•					
Gilbertson Sand and Gravel 1202 S. Lawson Road Camano Island				•					
Island County Drop Box Station – Bayview 5790 S. Kramer Road Clinton	•		•			•			
Island County Drop Box Station – Camano 75 E. Camano Hill Road Camano Island	•		•			•			
Island County Drop Box Station – Oak Harbor 3151 Oak Harbor Road Oak Harbor	•		•			•			
Island County Moderate-Risk Waste Facility 20018 SR 20 Coupeville						•			
Island County Recycle Park – Coupeville 20018 SR 20 Coupeville	•					•			

Table 13-1, continued
Active Solid Waste Permits Issued by Island County Public Health
(January 2006)

	Composting Facility	Material Recovery Facility	Transfer Station	Storage or Treatment Piles	Waste Tire Storage Facility	Moderate-Risk Waste Facility	Land Application Facility	Surface Impoundment or Tank	Collection and Transport Vehicles
Island County Solid Waste Complex									
20018 SR 20 Coupeville		•	•	•				•	
Island Disposal, Inc.									
520 W. State Highway 20 Coupeville		•	•						•
Island Recycling									
20014 SR 525 Freeland		•	•	•		•			
Krieg Construction, Inc.									
70 W. Sleeper Road Oak Harbor				•					
Mailiard's Landing Nursery, Inc.									
3060 N Oak Harbor Road Oak Harbor		•		•					
Midvale Solid Waste and Recycling									
11645 SR 525 Langley				•					
Navy Whidbey Recycle		Permit Exempt							
3485 N. Langley Blvd, Bldg 2555 Oak Harbor			•			Limited - Exempt			
Oak Harbor Auto Wrecking							•		
1201 NE 16th Avenue Oak Harbor		•			•	Limited			
Oak Harbor Recycling Center									
2050 NE 16th Avenue Oak Harbor		•				Limited			
We Dig It Gravel									
204 E. Frostad Road Oak Harbor				•					

Table 13-2
Summary of Solid Waste Related Complaints in 2004 through 2006

Complaint	2004	2005	2006
Improper Storage	41	39	28
Litter	1	4	0
Illegal Dumping	28	44	104
Total	70	87	132

Litter and illegal dumping in Island County are being addressed in several ways. Island County receives funding from the Department of Ecology under the Community Litter Clean-Up Program, which is used to clean up litter on public property. Litter grant guidelines limit clean-up activities to right-of-way areas not covered under adopt-a-road programs.

Another important program in Island County is the Environmental Health Assessment Team (EHAT). EHAT is a volunteer program that is supported by Public Health and that provides advice to the Board of Health. Their goal is to develop community-based processes to first identify and assess environmental health issues, prioritize those problems, and then to help develop solutions to the most critical. They have currently taken on two issues: illegal dumping/littering and a “walkable Island County.” Their efforts on illegal dumping and littering include two public forums that have led to increased public awareness and new ideas for education, economic incentives and enforcement. They have helped to distribute brochures, such as Ecology’s brochure on unsecured loads, litter bags for cars, stickers and window clings. They are also adopting Ecology’s “litter and it will hurt” campaign by arranging for signage throughout the county and other activities.

13.2.2 Enforcing Solid Waste Regulations

Enforcement procedures for solid waste violations are time consuming and often troublesome. Environmental Health Specialists follow the procedures identified below, although depending on the severity and/or frequency of a violation, certain administrative steps may be skipped as is necessary to protect public health:

- Investigation and confirmation of a violation;
- A request for compliance and return inspection;
- A notice of violation and return inspection (an optional administrative appeal would be available to the violator);
- A notice and order for compliance (an optional appeal to the Hearing Examiner would be available to the violator);
- A remedy that includes abatement, civil penalties and other legal enforcement actions; and
- Recovery of abatement costs and civil penalties.

Current Island County Code procedures require individuals accused of violating solid waste handling regulations to appear in District Court before an abatement order or civil penalties may be assessed. A civil penalty does not result in cost recovery for the abatement costs incurred by Island County Public Health.

13.2.3 Enforcing the Secure Loads Regulation

Several tragic incidents in the past few years have led to increased concern and enforcement of requirements for loads to be secured properly while being transported. State law (RCW 46.61.655) was modified in 2005 to increase the penalties for unsecured loads. The penalty for an accident caused by unsecured load can now be as high as \$5,000 plus jail time if an item falls off of a vehicle and causes bodily injury to another person. Loads that are not secured properly also create litter and it has been estimated that as much as 25 percent of the roadside litter is the result of improperly secured loads.

To address these issues, there has been much publicity and education conducted on the problems caused by improperly-secured loads. After careful consideration, the Island County solid waste facilities have begun adding a fee for customers who arrive with unsecured loads. EHAT has also arranged for a video on the secure load requirements to be aired on a local television channel and has provided brochures on this topic that are being distributed by scalehouse staff at the Island County Solid Waste Complex.

13.3 Alternative Regulatory Strategies

Two alternative regulatory strategies are discussed in the sections below.

13.3.1 Regulatory Alternative A-Discourage Litter and Illegal Dumping

Regulatory Alternative A emphasizes discouraging littering and illegal dumping. A campaign will be continued and expanded to increase public awareness of illegal dumping problems and encourage proper handling of waste materials. Problems associated with littering and illegal dumping will continue to be addressed by solid waste related presentations to school groups and community and service organizations. Additional efforts would be made to increase participation in existing programs such as the WSU Beach Watchers, EHAT, WSU Waste Wise, Adopt-a-Highway and the annual litter pickup program. Events would be publicized to encourage a sense of responsibility toward preventing further illegal dumping as well as recognize the volunteers. Participants at organized clean-up events could be provided with gloves, collection bags and other necessary materials, and the disposal fees for the collected waste would also be waived. Local businesses could be solicited to sponsor ongoing clean-up activities for a specific area such as a park. Owners of property used for illegal dumping would be encouraged to erect barriers on their property such as fences, berms or ditches to control access and post warning signs. Annual costs for Regulatory Alternative A are estimated at \$10,000 in addition to funds already expended on existing programs.

13.3.2 Regulatory Alternative B-Increase Public Awareness and Enforcement for Unsecured Loads

Regulatory Alternative B would continue ongoing efforts to promote public awareness of the problems caused by improperly secured loads. Public education efforts for this alternative could be modeled after efforts used for illegal dumping (see Alternative A) or could even be combined with those activities. Annual costs for Regulatory Alternative B are estimated at \$7,000 in addition to funds already expended on existing efforts.

13.4 Evaluation of Alternative Strategies

The alternative regulatory strategies are compared with respect to three evaluation criteria: clean-up response time, long-term enhancement of local communities, and costs.

13.4.1 Clean-Up Response Time

Illegal dumping activities are most effectively controlled when they are remedied in a timely fashion before wind, animals or storm water scatter the materials over a larger area. Prompt clean-up also discourages others from behaving in a similar manner. Under this criteria, the strategies that respond to illegal dumping in the timeliest manner are rated highest.

Regulatory Alternative B would provide the timeliest response in the sense that it helps to prevent litter in the first place. Regulatory Alternative A would require the most time to respond because it relies on volunteers to accomplish clean-up activities.

13.4.2 Long-Term Enhancement of the Community

Communities that are maintained free from litter and illegal dumping are more desirable places to live. Under this criterion, those strategies that provide communities with the best long-term potential to maintain a clean environment will be rated higher.

Regulatory Alternative A is likely to provide the greatest potential for long-term enhancement of local communities. This alternative discourages dumping by promoting community pride and volunteerism. The volunteer efforts can be used as a positive example of community problem solving. Regulatory Alternatives A and B both directly confront violators and are effective in achieving clean up.

13.4.3 Costs

The planning jurisdiction wants solid waste management services to be provided at the lowest possible price. The alternative strategies with the lowest costs will be rated highest.

Neither of the regulatory alternatives would require significant additional expenditures. Regulatory Alternative A relies on donated and sponsored labor. It may also reduce ongoing clean-up costs by encouraging others to assist with community clean-up activities. Regulatory Alternative B could raise funds for prevention and enforcement activities through fees for unsecured loads.

13.4.4 Ratings of Alternative Regulatory Strategies

A summary of the ratings for the alternative regulatory strategies is presented in Table 13-3. Based on the evaluation of these alternatives, both are recommended to be pursued (see Section 14.9).

Table 13-3
Summary Comparison of Alternative Regulatory Strategies

Alternative		Rating		
		Clean Up Response Time	Enhancement of the Community	Costs
A	Discourage Litter and Illegal Dumping	L	H	H
B	Reduce Unsecured Loads	H	M	H
		H - High	M - Medium	L - Low

Section 14

Recommended Management Strategies

This section identifies the recommended management strategies and presents a plan to implement the recommendations. The recommendations are intended to guide decision-making activities for the Solid Waste Division for the next six years or longer. A period of six years is examined below because state law requires that a minimum of six years of construction and capital acquisition costs be examined by solid waste management plans (RCW 70.95.090), but the following programs could continue to be implemented for a longer period if appropriate. The recommendations do not commit the planning jurisdiction to any single course of action. Implementation of individual program elements will be accomplished through annual budgets.

14.1 Waste Reduction

The recommended waste reduction alternatives are (note that Alternatives A and B, and other alternatives that are not shown in the following sections, are not being recommended):

- C – Adult education and promotion of waste reduction techniques
- D – Youth education programs
- E – Financial support through reduced tipping fees and publicizing services for non-profit organizations that are involved in reuse

A concept-level cost estimate for the recommended waste reduction strategy is presented in Table 14-1. Total costs are estimated at \$498,000 for the six-year planning period.

Table 14-1
Concept-Level Cost Estimate for the Recommended Waste Reduction Strategies
(2006 dollars in thousands)

Project or Activity	2007	2008	2009	2010	2011	2012	Total
Adult Education and Promotions	55	55	55	55	55	55	330
Youth Education Program	18	18	18	18	18	18	108
Financial Support	12	12	12	12	12	12	72
Totals	85	85	85	85	85	85	510

Financial support will continue to be available for non-profit organizations that collect used household products for reuse. A tipping fee reduction will support the costs of disposing donated items that are no longer useable. A 50 percent discount for waste disposed by nonprofit reuse organizations will be provided through the six-year planning period.

The youth education program focuses on classroom presentations at schools in Island County. The presentations will describe the local solid waste management program and explain how to generate less waste, how to avoid products containing hazardous ingredients and how to recycle waste materials that have value as secondary materials. The youth education program will be conducted every year. The program will include tours of solid waste facilities for 4th and 5th grade students, plus follow-up visits and presentations to their classrooms.

The existing adult education outreach program will continue to provide training in waste management for community volunteers. In exchange for the training, the volunteers will provide 15 to 45 hours of public service involving research and educational activities that promote the recommended waste management priorities. The expense for this program also includes materials such as resource guides, to be published once or twice per year as needed, and brochures. The adult education program will continue through the six-year planning period.

14.2 Recycling

Several alternatives are being recommended for recycling, including:

- B – Investigate and, where possible, implement curbside recycling and then promote
- C – Promote private yard waste diversion
- D – Investigate single-stream recycling for Whidbey Island
- E – Investigate local markets for glass
- F – Investigate local markets for other materials
- G – Continue to pursue co-generation options for wood waste
- H – Create off-site recycling area at Camano Transfer Station
- I – Food waste composting

All but Alternatives B and H can be addressed by allocating existing staff time to the effort, at essentially no additional cost, although staff efforts could lead to program changes that would have positive or negative financial impacts for a variety of organizations or businesses. A concept-level cost estimate for Alternative H is presented in Table 14-2. Total costs for Alternative H are estimated at up to \$100,000 in addition to other expenditures for the Camano Island Transfer Station improvements (see Section 14.4).

Table 14-2
Concept-Level Cost Estimate for the Recommended Recycling Strategies
(2006 dollars in thousands)

Project or Activity	2007	2008	2009	2010	2011	2012	Total
Off-Site Recycling Area for Camano Transfer Station		100					100
Totals		100					100

Recycling activities will continue to focus on program economics and operational efficiency. Other recommended activities include improved handling and transfer capabilities, materials prioritization, contract re-negotiation, and consolidation of processing operations where appropriate.

14.3 Collection

Two alternatives are being recommended for waste collection, including:

- B – Promote voluntary curbside waste collection services
- C – Investigate alternative garbage and recycling services

Promotion of curbside waste collection services is recommended to reduce the rate of growth in customers at County solid waste receiving facilities. Reducing the rate of growth may delay the need for capital improvements. The promotion will emphasize the cost savings of curbside collection services over drop-off disposal fees. Alternative collection methods for garbage and recyclables could also delay the need for capital improvements by reducing the amounts of waste disposed through increased recycling.

Both of these alternatives can be addressed by allocating existing staff time to the effort, at essentially no additional cost, although staff efforts could lead to program changes that would have positive or negative financial impacts for waste collection businesses.

14.4 Transfer

Several alternatives are being recommended for the transfer system, including:

- A – Upgrade the Oak Harbor Drop Box Station
- B – Upgrade compactor at the Island County Solid Waste Complex and increase storage capacity at the Island County Solid Waste Complex and Camano Transfer Station
- D – Increase capacity at the Bayview Drop Box Station
- E – Continue to explore and develop increased efficiencies at the Camano Transfer Station
- F – Start planning for a new transfer station for Camano Island
- G – Increase or modify rates to ensure self-sustaining programs

Only the first three alternatives listed above have direct costs that can be identified at this time, and concept-level cost estimates for these alternatives are shown in Table 14-3. Total costs for these alternatives are estimated at \$350,000 for the six-year period.

Table 14-3
Concept-Level Cost Estimate for the Recommended Transfer Strategies
(2006 dollars in thousands)

Project or Activity	2007	2008	2009	2010	2011	2012	Total
Upgrade the Oak Harbor Drop Box Station	75						75
Increase Storage Capacity at Coupeville	250	310	310				870
Increase Capacity at Bayview			75				75
Totals	325	310	385	0	0	0	1,020

14.5 Transport and Disposal

Four solid waste facilities are designated for municipal solid waste and two solid waste facilities are designated for demolition waste. The designated disposal facilities are identified in Table 14-4.

Table 14-4 Designated Disposal Facilities for Solid Waste Generated in the Planning Area	
Waste Type	Designated Disposal Facility
Municipal Solid Waste	Oak Harbor Drop Box Station
	Island County Solid Waste Complex
	Bayview Drop Box Station
	Camano Transfer Station
Demolition Waste	Island County Solid Waste Complex
	Camano Transfer Station

Three alternatives are being recommended for transport and disposal, including:

D – Purchase additional buffer areas

E – Investigate development of additional wells, if necessary

F – Investigate additional methods for densifying wastes

The purchase of additional buffer areas around solid waste facilities, as the land becomes available or necessary, would be prudent. Additional monitoring wells may be necessary or desirable in the future. The density of the waste being transported out of the county has become a critical economic factor due to increasing transportation costs. The Solid Waste Division should identify, and implement where cost-effective, methods to increase the density of waste and thus maximize the efficiency of the transportation system. The expense for all three of these alternatives cannot be determined until further details are defined, such as the number and depth of the wells and amount of land to be purchased.

14.6 Moderate-Risk Waste

Two management strategies are recommended for moderate-risk waste:

A – Public education for household hazardous waste

B – Education and technical assistance for Small Quantity Generators

A concept-level cost estimate for the moderate-risk waste management strategy is presented in Table 14-5. Total six-year costs are estimated at \$120,000.

The public education activities for household hazardous waste will identify household products that contain hazardous ingredients, promote safer alternatives, and explain how to dispose of unwanted products that contain hazardous substances. These messages will be incorporated into educational materials describing the local storm water, ground water and wastewater treatment programs.

The Small Quantity Generator education and technical assistance campaign will focus on waste generators and promote understanding of waste management responsibilities and awareness of the recommended management practices. The campaign will continue for two years, and may be repeated in the future depending on the results of the next campaign.

Table 14-5
Concept-Level Cost Estimate for the Recommended Moderate-Risk Waste Management Strategies
(2006 dollars in thousands)

Project or Activity	2007	2008	2009	2010	2011	2012	Total
Public Education for Household Hazardous Waste	10	10	10	10	10	10	60
Education and Technical Assistance for Small Quantity Generators		30	30				60
Totals	10	40	40	10	10	10	120

14.7 Other Special Waste

Three management strategies for other special wastes are recommended:

- A – Investigate diversion options for demolition wastes
- B – Adopt contingency plan for disaster debris
- C – Alternative collection program(s) for special wastes

The only current management practice available for non-wood demolition debris is disposal as a solid waste at the Coupeville and Camano Transfer Stations. Diverting demolition wastes to a beneficial use would be more desirable, and options should be explored for methods to accomplish that.

Potential locations for staging and storage sites for disaster debris are identified in this plan. A total of 13 sites, 11 on Whidbey Island and two on Camano Island (see Figure 11-1) have been identified as potential staging and storage sites. Recommended management strategies for different types of disaster debris are also identified in this plan. Suggested management practices for disaster debris are shown in Table 11-3.

This plan also recognizes that additional programs may be needed in the future to address other special wastes such as pharmaceuticals, e-waste, agricultural plastics, drug manufacture contaminated material and other problem wastes. In the interim, prior to development/adoption of formalized programs, the Island County Public Works/Solid Waste Division will coordinate with appropriate regulatory agencies and certificated (franchised) haulers, and will deal with such wastes on a case-by-case basis with respect to handling, transport and final disposition in designated, approved facilities.

14.8 Administration

Two administrative management strategies are recommended:

- A – Maintain target balance for working capital
- B – Conduct a solid waste operational assessment and benchmarking study

Maintaining the target balance for working capital is recommended. The working capital balance should be reviewed and potentially revised every three years in conjunction with a solid waste rate study. The target balance should include the present value of anticipated six-year capital improvements, the present value of projected post-closure maintenance costs for the Coupeville Landfill (that portion not covered by operating revenues), and a contingency amount for potential environmental degradation at County waste processing and disposal facilities. The contingency amount for environmental degradation may be adjusted with a pollution liability insurance policy.

The solid waste operational assessment and benchmarking study will cost about \$50,000 and should be conducted in 2007-2008.

14.9 Regulation

Two regulatory strategies are recommended for the six-year planning period:

A – Discourage litter, illegal dumping

B – Increase public awareness and enforcement of secure load requirements

The regulatory strategies are discussed below. Concept-level cost estimates for the recommended regulatory strategies are presented in Table 14-6. The total six-year cost is estimated at \$102,000.

Efforts to prevent littering and illegal dumping will be included in all solid waste presentations to school groups and community and service organizations. Volunteer organizations that provide clean-up services such as the WSU Beach Watchers, EHAT, WSU Waste Wise, Adopt-a-Highway and annual litter pickup programs will be supported. Support may include gloves, collection bags, disposal fees and public recognition of service.

The effort to increase awareness and enforcement of the secure load requirements is an ongoing activity that should be continued.

Table 14-6
Concept-Level Cost Estimate for the Recommended Regulatory Strategies
(2006 dollars in thousands)

Project or Activity	2000	2001	2002	2003	2004	2005	Total
Discourage Litter, Illegal Dumping	10	10	10	10	10	10	60
Increase Public Awareness and Enforcement of Secure Load Requirements	7	7	7	7	7	7	42
Totals	17	17	17	17	17	17	102

14.10 Six-Year Implementation Schedule

All recommended management strategies are scheduled for implementation within the six-year planning period. The proposed implementation schedule is presented in Table 14-7. The waste transfer and transport and disposal projects are capital items.

Table 14-7
Implementation Schedule for Recommended Strategies

Recommended Project or Activity	2007	2008	2009	2010	2011	2012
Waste Reduction						
Adult Education and Promotion						
Youth Education						
Financial Support						
Recycling						
Investigate Curbside Recycling						
Promote Private Yard Waste Diversion						
Investigate Single-Stream Recycling for Whidbey Island						
Investigate Local Markets for Glass						
Investigate Local Markets for other Materials						
Continue to Pursue Co-Generation Options for Wood Waste						
Create Off-Site Recycling Area at Camano Transfer Station						
Investigate Food Waste Composting						
Collection						
Promote Waste Collection Services						
Investigate Collection Alternatives						
Transfer						
Upgrade the Oak Harbor Drop Box Station						
Upgrade Compactor at ICSWC, Increase Storage Capacity at ICSWC and Camano Transfer Station						
Increase Capacity at Bayview						
Continue to Explore and Develop Increased Efficiencies at Camano						
Start Planning for a New Transfer Station for Camano Island						
Increase or Modify Rates to Ensure Self-Sustaining Programs						
Transport and Disposal						
Purchase Buffer Land						
Additional Monitoring Wells						
Investigate Additional Methods for Densifying Wastes						
Moderate-Risk Waste						
Public Education						
Business Assistance						
Other Special Waste						
Investigate Diversion Options for Demolition Wastes						
Adopt Contingency Plan for Disaster Debris						

Table 14-7, continued
Implementation Schedule for Recommended Strategies

Recommended Project or Activity	2007	2008	2009	2010	2011	2012
Other Special Waste, continued						
Alternative Collection Program(s) for Special Wastes						
Administration						
Maintain Working Capital Balance	•			•		
Solid Waste Operational Assessment and Benchmarking Study						
Regulation						
Illegal Dumping and Litter Prevention Campaign Secure Load Publicity and Enforcement						

• Indicates a single event

14.11 Implementation Responsibilities

The Island County Public Works and Public Health Departments, the municipalities of Oak Harbor, Coupeville and Langley, the Washington State Utilities and Transportation Commission and the Department of Ecology share responsibilities for implementing the recommendations. Implementation responsibilities for the recommended projects and activities are summarized in Table 14-8. The Island County Solid Waste Advisory Committee will review implementation of new policies and programs and comment on proposed resolutions and ordinances prior to their adoption.

Table 14-8
Implementation Responsibilities

Management Function	Municipalities	County Public Works Dept.	Public Health	Utilities and Transportation Commission	Department of Ecology	Collection Companies
Reduction		•				
Recycling	•	•		•	•	•
Collection	•	•		•		•
Transfer		•				
Transport and Disposal		•				
MRW	•	•				
Other Special Waste		•			•	
Administration	•	•				
Regulation		•	•		•	

14.12 Funding Strategy

The recommended programs will be funded through garbage rates, tipping fees, other user fees, state grants and working capital. A summary of the funding sources for the recommended programs is presented in Table 14-9.

Garbage rates will be used to fund the solid waste collection, urban recycling and commercial recycling programs. Tipping fees will be used for the recommended waste reduction, transfer, transport and disposal, household hazardous waste, administration and regulation. Special user fees will fund residential recycling in rural areas, small quantity generator and other special waste programs. The state coordinated prevention grant funding will be used for the household hazardous waste and regulatory programs. Working capital and the investment income from working capital will be used for fund capital improvements for the waste receiving facilities, post-closure care of the Coupeville Landfill and environmental remediation contingencies. Other available grant funding for pollution prevention programs will be used for waste reduction, residential recycling and moderate-risk waste management programs.

Table 14-9
Recommended Funding Sources for Solid Waste Programs

Project or Activity	Garbage Rates	Tipping Fee	Special User Fee	Coordinated Prevention Grant	Working Capital	Other Funding as Available
Reduction		•				•
Recycling	•	•	•	•		•
Collection	•	•				
Transfer		•			•	•
Transport and Disposal		•				
MRW	•	•	•	•		•
Other Special Waste			•			•
Administration		•				
Regulation		•		•		

14.13 Procurement Strategy

Island County has primary responsibility for managing solid waste within the planning jurisdiction. To effectively discharge its responsibility, the County is assigned primary authority to develop and operate the necessary handling facilities and management programs. Procurement responsibilities for municipal solid waste facilities and related services belong exclusively to Island County.

At its discretion, Island County may develop facilities and provide services as public works operations or it may procure facilities and services from public or private service providers. Local public procurement policies and procedures will apply to all procurement processes.

14.14 Twenty-Year Solid Waste Management Strategies

Long-term issues facing the planning jurisdiction in the future include potential transfer station improvements, further regionalization of waste management services, financing the necessary services and recycling building materials.

14.14.1 Transfer Station Improvements

The Oak Harbor, Bayview and Camano solid waste facilities were developed in the 1960s to replace rural landfill facilities. As population increased and management strategies evolved to include recycling and moderate-risk waste handling, use of the receiving facilities has increased significantly and improvements have been made and will continue to be made. As growth continues, improved access, additional services, better vehicle queuing techniques, and additional unloading and storage capacity will be actively pursued. Factors to be considered in evaluating improvements should include the need for convenient public access and greater efficiencies to be gained by expanding or modifying facilities, while weighing those factors against the costs and economic impacts. Larger concerns, such as the reduction of transportation distances and hence the reduction of fuel consumption and air emissions, will also be important factors to consider in the future.

14.14.2 Regional Management Options

Regionalization of waste management services has been a dominant industry trend over the past several years. Economies of scale have reduced the costs of waste transport and disposal. The planning jurisdiction will continue to investigate regional waste management opportunities that are consistent with local waste management objectives and that protect the financial integrity of the solid waste program.

For Island County and the three cities and towns, combining their efforts and programs into a cohesive regional program provides economies of scale and other distinct benefits to all. One of the three cities or towns may decide in the future, however, that they wish to conduct their own solid waste system and in that case it should be understood that:

- The municipality remains fiscally responsible for their share of past debts, such as the ongoing post-closure costs for the Coupeville Landfill;
- The municipality will need to develop their own solid waste management plan, and will need to follow typical guidelines for preparing such a plan; and
- The municipality would need to provide the appropriate solid waste services to their residents and businesses, including curbside or drop-off recycling, MRW collection and other services equivalent to the remainder of the county, or enter into an agreement with the County to pay a pro-rated share of the expenses for the County to provide those services.

14.14.3 Building Materials Reuse

Recovery and reuse of used building materials has become a routine alternative for demolition materials in several local communities over the past few years. The ability to reuse building materials provides demolition contractors, builders and others with a non-disposal alternative for

some of their waste materials, while preserving the investment in resources and energy that was originally required to produce the building materials. Island County will continue to investigate the potential for establishing a public-private partnership for development and operation of a building materials reuse facility.

14.14.4 Expanded Organics Composting Facilities

Diversion of organics from the municipal solid waste stream has the potential to significantly reduce the quantity of waste disposed. If food waste can be added to the materials being composted locally, up to 15 percent more of the waste stream could be diverted from disposal facilities. The economics of composting food waste and other organics favor local processing facilities and local use of the compost product. The marketing and sales requirements for compost favor private rather than public operations. Innovative incentives may be necessary to encourage the commitment of private capital to local yard waste processing operations.

14.14.5 Construction, Demolition and land Clearing Waste Recycling

Construction, demolition and land clearing waste have received considerable attention in the past few years. Private sector service providers have taken the lead in developing recycling and disposal alternatives for these hard-to-handle materials. The developing private sector initiatives need to be monitored so that information regarding alternative management strategies can be provided to waste generators.

14.14.6 Management of Electronic Equipment (E-Waste)

Concern has been expressed regarding the disposal of circuit boards and computer monitors in landfills. The concern is that these items contain toxic metals and other contaminants that may result in a leachate that is more difficult to treat and dispose.

There are no current limitations on disposing computer-related items with municipal solid waste in Island County, but future regulations may require managing these materials through the moderate-risk waste program or through private efforts. The County will participate in the state-mandated program anticipated to go into effect January 1, 2009.

14.15 Procedures for Amending the Plan

The Solid Waste Management-Reduction and Recycling Act (RCW 70.95) requires local governments to maintain their solid waste plans in current condition. Plans must be reviewed and revised, if necessary, every five years. This plan should be reviewed and, if necessary, revised in 2012.

Individuals or organizations wishing to propose plan amendments before the scheduled review must petition the Island County 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 Director of the Department of Public Works.

If the Director of the Department of Public Works decides that the petition warrants further consideration, the petition will be referred to the Solid Waste Advisory Committee for review and recommendation. The Solid Waste Manager will draft the proposed amendment together with the Solid Waste Advisory Committee. 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 Director of the Department of Public Works may develop reasonable rules for submitting and processing proposed plan amendments, and may establish reasonable fees to investigate and process petitions. All administrative rulings of the Director may be appealed to the Board of Island County Commissioners.

Minor changes that may occur in the solid waste management system, whether due to internal decisions or external factors, can be adopted without the need to go through a formal amendment process. If a question should exist as to whether or not a change is “minor” or not, it should be discussed by the SWAC and a decision made based on the consensus of that committee.

Implicit in the development and adoption of this plan is the understanding that emergency actions may need to be taken by the County in the future for various reasons, and that these actions can be undertaken without needing to amend this plan beforehand. In this case, Island 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 Island County solid waste system, an amendment to this plan will be prepared. 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.

Appendix A

Environmental Checklist

PURPOSE OF CHECKLIST:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

INSTRUCTIONS FOR APPLICANTS:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply". Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

USE OF CHECKLIST FOR NON-PROJECT PROPOSALS:

Complete this checklist for non-project proposals, even though questions may be answered "does not apply". IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON-PROJECT ACTIONS (part D). For non-project actions, the references in the checklist to the words "project", "applicant," and "property or site" should be read as "proposal", "proposer", and "affected geographic area," respectively.

TO BE COMPLETED BY APPLICANT - EVALUATION FOR AGENCY USE ONLY

A. BACKGROUND

1. Name of proposed project, if applicable:

Island County Solid Waste Management Plan

2. Name of applicant:

Island County Public Works Department Solid Waste Program

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

Dave Bonvouloir, Solid Waste Manager, Island County Public Works
Department, P.O. Box 5000, Coupeville, Washington 98239-5000; (360) 6797340

4. Date checklist prepared:

December 1, 1999

5. Agency requesting checklist:

Island County Planning Department

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

The management recommendations will be implemented over a 6-year period beginning in 2000. A summary of the implementation schedule is presented in Table 14-8 of the document.

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

No

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

A State Environmental Policy Act review will be conducted for each project or activity that requires a building or solid waste permit.

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

No

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

The management plan must be adopted by the participating jurisdictions: the Cities of Oak Harbor and Langley, the Town of Coupeville and Island County. In addition, the Washington State Department of Ecology and the Washington State Utilities and Transportation Commission must approve the plan.

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

Solid waste management recommendations for municipal solid waste, moderate-risk waste and other special waste are developed for the functional elements of a solid waste management system. Recommended actions include management policies, facility improvements, education and promotion, assignment of implementation responsibilities, and a funding strategy.

12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

Island County, Washington excluding Naval Air Station Whidbey Island

B. ENVIRONMENTAL ELEMENTS

1. Earth

- a. **General description of the site (underline one):** Flat, rolling, hilly, steep slopes, mountain, other.

Does not apply

b. What is the steepest slope on the site (approximate percent slope)?

Does not apply

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Does not apply

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Does not apply

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Does not apply

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Does not apply

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Does not apply

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Does not apply

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Does not apply

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.**

Does not apply

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:**

Does not apply

3. Water

- a. Surface:**

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

Does not apply

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

Does not apply

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

Does not apply

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

Does not apply

- 5) **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

Does not apply

- 6) **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

Does not apply

b. Ground:

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

Does not apply

- 2) **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals ... ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

Does not apply

c. Water Runoff (including storm water):

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

Does not apply

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

Does not apply

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

Does not apply

4. Plants

- a. **Check or circle types of vegetation found on the site:**

☐ deciduous tree: alder, maple, aspen, other
☐ evergreen tree: fir, cedar, pine, other
☐ shrubs
☐ grass
☐ pasture
☐ crop or gram
☐ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
☐ water plants: water lily, eelgrass, milfoil, other
☐ other types of vegetation

- b. **What kind and amount of vegetation will be removed or altered?**

Does not apply

- c. **List threatened or endangered species known to be on or near the site.**

Does not apply

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

Does not apply

5. Animals

- a. **Underline any birds and animals which have been observed on or near the site or are known to be on or near the site:**

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other:

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

Does not apply

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

Does not apply

- d. Proposed measures to preserve or enhance wildlife, if any:**

Does not apply

6. Energy and Natural Resources

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

Does not apply

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

Does not apply

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

Does not apply

7. Environmental Health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**

Does not apply

- 1) Describe special emergency services that might be required.**

Does not apply

2) Proposed measures to reduce or control environmental health hazards, if any:

Does not apply

b. Noise

1) What types' of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Does not apply

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Does not apply

3) Proposed measure to reduce or control noise impacts, if any:

Does not apply

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

Does not apply

b. Has the site been used for agriculture? If so, describe.

Does not apply

c. Describe any structures on the site.

Does not apply

d. Will any structures be demolished? If so, what?

Does not apply

e. What is the current zoning classification of the site?

Does not apply

f. What is the current comprehensive plan designation of the site?

Does not apply

g. If applicable, what is the current shoreline master program designation of the site?

Does not apply

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Does not apply

i. Approximately how many people would reside or work in the completed project?

Does not apply

j. Approximately how many people would the completed project displace?

Does not apply

k. Proposed measure to avoid or reduce displacement impacts, if any:

Does not apply

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Does not apply

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Does not apply

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Does not apply

c. Proposed measures to reduce or control housing impacts, if any:

Does not apply

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what' is the principal exterior building material(s) proposed?

Does not apply

b. What views in the immediate vicinity would be altered or obstructed?

Does not apply

c. Proposed measures to reduce or control aesthetic impacts, if any:

Does not apply

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Does not apply

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Does not apply

c. What existing off-site sources of light or glare may affect your proposal?

Does not apply

d. Proposed measures to reduce or control light and glare impacts, if any:

Does not apply

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?**

Does not apply

- b. Would the proposed project displace any existing recreational uses? If so, describe.**

Does not apply

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

Does not apply

13. Historic and Cultural Preservation

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.**

Does not apply

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.**

Does not apply

- c. Proposed measures to reduce or control impacts, if any:**

Does not apply

14. Transportation

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.**

Does not apply

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

Does not apply

- c. How many parking spaces would the completed project have? How many would the project eliminate?**

Does not apply

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

Does not apply

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

Does not apply

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.**

Does not apply

- g. Proposed measures to reduce or control transportation impacts, if any:**

Does not apply

15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.**

Does not apply

- b. Proposed measures to reduce or control direct impacts on public services, if any.**

Does not apply

16. Utilities

- a. Underline utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.**

Does not apply

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.**

Does not apply

C. SIGNATURE

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

Signature: _____

Date Submitted: _____

D. SUPPLEMENTAL SHEET FOR NON-PROJECT ACTIONS

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

- 1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage or release of toxic or hazardous substances; or production of noise?**

The proposed solid waste receiving facility improvements at the Coupeville, Bayview and Camano facilities include paving. Additional impervious surfaces will increase the rate and quantity of stormwater runoff from these sites.

Increased participation in the drop-off moderate-risk waste collection program will increase automobile air emissions as participants drive to and from the

receiving facilities. Increased participation also increases the potential for accidents that could involve the release of toxic and hazardous substances.

Increased subscription to waste collection services may increase noise emissions from waste collection vehicles.

Proposed measures to avoid or reduce such increases are:

Stormwater detention will be included in the site development plans for the receiving facility improvements.

Solid waste generators will be encouraged to subscribe to commercial waste collection services to reduce the number of arriving vehicles at the waste receiving facilities.

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

The waste management recommendations are intended to protect and enhance environmental resources.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

Drop-off collection services for moderate-risk waste provides a safe means of disposing household hazardous waste and small quantity generator waste.

3. How would the proposal be likely to deplete energy or natural resources?

Transporting and waste materials for recycling and disposal requires petroleum fuels. Electrical energy will be needed to process waste materials.

The recommended recycling strategies are intended to conserve materials and avoid land disposal of waste materials.

Proposed measures to protect or conserve energy and natural resources are:

Waste reduction is the highest-priority waste management strategy.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

The waste receiving facilities at Coupeville are located within the Central Whidbey Island Historical Preservation District.

Proposed measures to protect such resources or to avoid or reduce impacts are:

The Central Whidbey Island Historical Preservation District will review construction plans for improvements at the Coupeville facility.

5. **How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?**

Does not apply

Proposed measures to avoid or reduce shoreline and land use impacts are:

Does not apply

6. **How would the proposal be likely to increase demands on transportation or public services and utilities?**

Drop-off collection services for recyclable materials, solid waste and moderate-risk waste will generate vehicular trips to the waste receiving facilities. Queuing problems affecting traffic flow on adjacent roadways may occur during periods of high demand.

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

The feasibility of turning lanes on Highway 20 at the Coupeville receiving facility will be investigated.

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

The proposal is consistent with all known local, state and federal laws and requirements for environmental protection.



**ISLAND COUNTY
PLANNING & COMMUNITY DEVELOPMENT**

Phillip Bakke, AICP, Director

PHONE: (360) 679-7339 ■ from Camano (360) 629-4522 ■ from S. Whidbey (360) 321-5111
FAX: (360) 679-7306 ■ P. O. Box 5000, Coupeville, WA 98239-5000
Internet Home Page: <http://www.islandcounty.net/planning/>

January 25, 2007

Island County Public Works Department
Attn: Dave Bonvouloir
P.O. Box 5000
Coupeville, WA 98239

RE: 2007 to 2012 Island County Solid Waste and Moderate-Risk Waste Management Plan

Dave,

I have reviewed the SEPA environmental checklist and threshold determination that were prepared for the 2000-2005 Island County Comprehensive Solid Waste Management Plan. I have also reviewed the November 2006 draft amendments to the Plan prepared by the Solid Waste Advisory Committee. Thank you for forwarding these materials to the Planning Department for consideration of SEPA review of the draft amendments.

Pursuant to WAC 197-11-600 SEPA threshold determinations, environmental checklists and other SEPA documents do not have expiration dates. These types of previously evaluated environmental documents may be used as part of the SEPA review process.

Pursuant to WAC 197-11-630 states that an agency may adopt an existing environmental document after it has reviewed those documents and determined that it meets the Department's environmental review standards.

Upon review of the previously prepared environmental checklist and the related environmental threshold determination Island County Planning and Community Development finds that these documents meet the environmental review needs and standards for the proposal and therefore does not require it necessary to conduct additional environmental review. Attached you will find the official adoption notice. This notice **shall be provided** to agencies, citizens and groups that have identified themselves as having an interest in this process and by distributing copies to those parties who make a request.

I hope that this helps. Please do not hesitate to contact me if you have any questions.

Sincerely,

Jeff Tate, Assistant Director

**ADOPTION OF EXISTING
ENVIRONMENTAL DOCUMENT
AND ADDENDUM TO FEIS**

Description of current proposal: Amendments to the Comprehensive Solid/Hazardous Waste Plan.

Proponent: Island County

Location of current proposal: Island County, WA.

Title of document being adopted: SEPA environmental checklist and threshold determination issued for the 2000-2005 Island County Solid Waste Comprehensive Plan.

Agency that prepared document being adopted: Island County Public Works

Date adopted document was prepared: June 28, 2000

Description of document (or portion) being adopted: An environmental checklist was prepared, submitted and reviewed for the 2000-2005 Solid Waste Plan. The Plan is being updated however, the checklist information and threshold determination remain applicable.

If the document being adopted has been challenged (WAC 197-11-630), please describe:

The document is not currently under appeal

The document is available to be read at (place/time): Island County Courthouse, 6th and Main St., Coupeville, WA 98239

EIS REQUIRED. The lead agency has determined this proposal is not likely to have a significant adverse impact on the environment. To meet the requirements of WAC 197-11-600 and 630, the lead agency is adopting the document described above.

We have identified and adopted this document as being appropriate for this proposal after independent review. The document meets our environmental review needs for the current proposal and will accompany the proposal to the decision maker.


Name of agency adopting document: Board of Island County Commissioners

Contact person, if other than responsible official: Jeff Tate Phone: 360-679-7344

Responsible official: Phillip Bakke

Position/title: Director Phone: 360-679-7309

Address: P.O. Box 5000, Coupeville, WA 98239

Date: January 25, 2007 Signature: 

Appendix B

Cost Assessment Questionnaire

Please provide the information requested below:

PLAN PREPARED FOR THE COUNTY OF: Island

PLAN PREPARED FOR THE CITY OF: _____

PREPARED BY: Rick Hlavka, Green Solutions

CONTACT TELEPHONE: (360) 897-9533 DATE: February 5, 2007 _____

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 2007

YR.3 shall refer to 2009

YR.6 shall refer to 2012

Year refers to (circle one) **Calendar** (Jan 01 - Dec 31)

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?

Year 1	Year 3	Year 6
77,860	79,720	83,400

- 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.)

Year 1	Year 3	Year 6
77,860	79,720	83,400

1.2 References and Assumptions

See Table 3-2.

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.

Year 1	Year 3	Year 6
10,455	11,900	14,400

2.2 Tonnage Disposed

- 2.2.1 Please provide the total tonnage disposed in the base year, and projections for years three and six.

Year 1	Year 3	Year 6
59,670	69,100	87,100

2.3 References and Assumptions

See Table 4-1.

- 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. (Attach additional sheets as necessary.)

Implemented	Proposed
See pages 5-1 and 5-2	Financial Support for Reuse Organizations
	Youth Education Program
	Adult Education Program

- 3.1.2 What are the costs, capital costs and operating costs for waste reduction programs implemented and proposed?

Implemented		
Year 1	Year 3	Year 6
Proposed		
Year 1	Year 3	Year 6
85,000	85,000	85,000

- 3.1.3 Please describe the funding mechanism(s) that will pay the cost of the programs in 3.1.2.

Implemented		
Year 1	Year 3	Year 6
Proposed		
Year 1	Year 3	Year 6
Tipping Fee	Tipping Fee	Tipping Fee

3.2 Recycling Programs

- 3.2.1 Please list the proposed or implemented recycling program (s) and, their costs, and proposed funding mechanism or provide the page number in the draft plan on which it is discussed. (Attach additional sheets as necessary.)

Implemented		
Program	Cost	Funding
Drop-Off Stations	483,400	Tipping Fee
Curbside Collection - City of Oak Harbor	190,800	Municipal Garbage Rates
Proposed		
Program	Cost	Funding
Curbside Recycling	753,000 per year	Service Fees and Materials Sales
Camano Facility Improvements	100,000	Tipping Fee

3.3 Solid Waste Collection Programs

3.3.1 Regulated Solid Waste Collection Programs

Fill in the table below for each **UTC regulated** solid waste collection entity in your jurisdiction. (Make additional copies of this section as necessary to record all such entities in your jurisdiction.)

UTC Regulated Hauler Name	Island Disposal, Inc.		
G-Permit #154			
	Year 1	Year 3	Year 6
Residential and Commercial			
# of Customers	9,930	10,160	10,630
Tonnage Collected	16,900	17,300	18,100

UTC Regulated Hauler Name	Waste Management of Skagit County		
G-Permit #237			
	Year 1	Year 3	Year 6
Residential and Commercial			
# of Customers	3,363	3,443	3,600
Tonnage Collected	744	762	797

- 3.3.2 Other (non-regulated) Solid Waste Collection Programs Fill in the table below for other solid waste collection entities in your jurisdiction. (Make additional copies of this section as necessary to record all such entities in your jurisdiction.)

Hauler Name	City of Oak Harbor		
	Year 1	Year 3	Year 6
# of Customers	3,994	4,080	4,280
Tonnage Collected	8,500	8,700	9,100

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		
Year 1	Year 3	Year 6
303,905	316,200	335,500
Funding Source		
Year 1	Year 3	Year 6
Tipping Fee	Tipping Fee	Tipping Fee

- 3.6.2 Which cost components are included in these estimates?

Management-related services provided by County departments including Public Works, Auditor, Treasurer's Office, Central Services, Maintenance, Human Resources, Prosecuting Attorney, General Service and Board of County Commissioners.

- 3.6.3 Please describe the funding mechanism(s) that will recover the cost of each component.

Tipping Fees

3.7 Other Programs

For each program in effect or planned which does not readily fall into one of the previously described categories please answer the following questions.

3.7.1 Describe the program, or provide a page number reference to the plan.

Moderate-Risk Waste

3.7.2 Owner/Operator: Island County

3.7.3 Is UTC Regulation Involved? If so, please explain the extent of involvement in section 3.8.

No

3.7.4 Please estimate the anticipated costs for this program, including capital and operating expenses.

Year 1	Year 3	Year 6
188,500	196,100	208,100

3.7.5 Please describe the funding mechanism(s) that will recover the cost of this component.

Tipping Fees
Coordinated Prevention Grant

3.8 References and Assumptions

Costs shown in sections 3.6.1 and 3.7.4 are 2007 and 2005 figures, respectively, escalated at 2% per year. Actual budgets for these activities have not been adopted at this time.

4. FUNDING MECHANISMS: This section relates specifically to the funding mechanisms currently in use and the ones that will be implemented to incorporate the recommended programs in the draft plan. Because the way a program is funded directly relates to the costs a resident or commercial customer will have to pay, this section is crucial to the cost assessment process.

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	Transfer Cost	Transfer Station Location	Final Disposal Location	Total Tons Disposed (2005)	Total Revenue Generated (Tip Fee x Tons)
Island County Solid Waste Complex	Transfer Station	See Table 8.1	NA	Near Coupeville	Roosevelt Regional Landfill	See Table 8.2	2,047,300
Camano Transfer Station	Transfer Station	See Table 8.1	NA	Camano Island	Roosevelt Regional Landfill	See Table 8.2	806,677
Oak Harbor Drop Box Station	Drop Box	See Table 8.1	NA	Near Oak Harbor	Roosevelt Regional Landfill	See Table 8.2	67,737
Bayview Drop Box Station	Drop Box	See Table 8.1	NA	Near Bayview	Roosevelt Regional Landfill	See Table 8.2	222,451

Table 4.1.2 Tip Fee Components

Tip Fee by Facility		Surcharge	City Tax	State and County Tax	Trans. and Disposal Cost	Operational Cost	Admn. Cost	Closure Costs
Island County Solid Waste Complex	NA	NA	NA	NA	NA	NA	NA	NA
Camano Transfer Station	NA	NA	NA	NA	NA	NA	NA	NA
Oak Harbor Drop Box Station	NA	NA	NA	NA	NA	NA	NA	NA
Bayview Drop Box Station	NA	NA	NA	NA	NA	NA	NA	NA
All Facilities	0	0	0	3.5%	See operational cost	84.6%	6.5%	5.4%

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
Waste Reduction							100%			
Recycling					CPG	NA				
Moderate-Risk Waste					CPG	NA				

Table 4.1.4 Tip Fee Forecast

Tip Fee per Ton	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Island County Solid Waste Complex	See Table 8.1	See Table 8.1	See Table 8.1	TBD	TBD	TBD
Camano Transfer Station	See Table 8.1	See Table 8.1	See Table 8.1	TBD	TBD	TBD
Oak Harbor Drop Box Station	See Table 8.1	See Table 8.1	See Table 8.1	TBD	TBD	TBD
Bayview Drop Box Station	See Table 8.1	See Table 8.1	See Table 8.1	TBD	TBD	TBD

Note: TBD = to be determined.

4.2 Funding Mechanism Summary: In these matrices below, 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% and Collection Rates = 40%. The mechanisms must total to 100%.) If components can be classified as "other", please note the programs and their appropriate mechanisms. Provide attachments as necessary.

4.2.1 Year One

Funding Mechanism (in percent)							
Component	Tip Fee	Grant	Bond	Collection Tax	Rates, Service Fees	Other	Total
Waste Reduction	100						100
Recycling	100						100
Collection					100		100
ER&I	100						
Transfer	100						100
Land Disposal	100						100
Administration	100						100
Other							
Moderate-Risk Waste	50	50					100
Regulation	100						100

4.2.2 Year Three

Funding Mechanism (in percent)							
Component	Tip Fee	Grant	Bond	Collection Tax	Rates, Service Fees	Other	Total
Waste Reduction	100						100
Recycling	42				58		100
Collection					100		100
ER&I	100						
Transfer	100						100
Land Disposal	100						100
Administration	100						100
Other							
Moderate-Risk Waste	50	50					100
Regulation	100						100

4.2.3 Year Six

Funding Mechanism (in percent)							
Component	Tip Fee	Grant	Bond	Collection Tax	Rates, Service Fees	Other	Total
Waste Reduction	100						100
Recycling	42				58		100
Collection					100		100
ER&I	100						
Transfer	100						100
Land Disposal	100						100
Administration	100						100
Other							
Moderate-Risk Waste	50	50					100
Regulation	100						100

4.3 References and Assumptions

See Section 14.

4.4 Surplus Funds

NA

Appendix C

Interlocal Agreements for Solid Waste Management Planning

Interlocal agreements between Island County and the Cities of Oak Harbor and Langley, the Town of Coupeville and Naval Air Station Whidbey Island are presented in this appendix.

OAK HARBOR

INTERLOCAL AGREEMENT REGARDING

SOLID WASTE MANAGEMENT

1. RECITALS/PURPOSE

1.1 Island County and each of the Cities executing this Agreement are authorized and directed by Chapter 70.95 RCW to prepare a Comprehensive Solid Waste Management Plan, and are further authorized by Chapter 39.34 RCW to enter into an Interlocal Agreement for the administration and implementation of said Plan.

1.2 Island County has prepared a Comprehensive Solid Waste Management Plan which has been approved by the Washington State Department of Ecology and adopted by the Board of Island County Commissioners. The adopted plan includes a recycling element for the county and cities of the county.

1.3 Providing the most effective and efficient control of solid waste generated in Island County, including its cities, requires designation and use of the solid waste disposal system established by the county and the comprehensive plan of the county to the fullest extent possible. This interlocal agreement designates and provides for the use of that system by cities.

Island County and the undersigned cities agree as follows:

2. Definitions. For the purposes of this Agreement, the following definitions apply:

2.1 "City" means a City or Town located in Island County, Washington.

2.2 "Comprehensive Solid Waste Management Plan" or "Comprehensive Plan" means the Island County Comprehensive Solid Waste Management Plan, including a recycling element, as adopted by Island County on December 27, 1990, and as amended from time to time thereafter.

2.3 "County" means Island County, Washington.

2.4 "County System" means all facilities for solid waste handling owned or operated, or contracted for, by the County, and all administrative activities related thereto.

2.5 "Interlocal Agreement" means this Interlocal Agreement Regarding Solid Waste Management.

2.6 "Person" means an individual, firm, association, partnership, political subdivision, government agency, municipality, industry, public or private corporation, or any other entity whatsoever.

2.7 "Solid Waste" means solid waste as defined by RCW 70.95.030 (16) and WAC 173-304-100 (73) with the exception of wastes excluded by WAC 173-304-015 as now in effect or hereafter amended.

2.8 "Solid waste handling" means the management, storage, collection, transportation, treatment, utilization, processing, and final disposal of solid wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from such wastes or the conversion of the energy in such wastes to more useful forms or combinations thereof, and as such term may be modified by amendments to RCW 70.95.030(17).

3. Responsibilities for Solid Waste Disposal. For the duration of this Interlocal Agreement, the County shall be responsible for the disposal of all Solid Waste generated within unincorporated areas of the County and within each of the Cities signing this Agreement to the extent provided in the Comprehensive Solid Waste Management Plan. The County shall not be responsible for disposal of nor claim that this Agreement extends to Solid Waste that has been eliminated through waste reduction or waste recycling activities in conformity with the Comprehensive Solid Waste Management Plan.

4. Comprehensive Plan. For the duration of this Interlocal Agreement, each City shall participate in the Comprehensive Solid Waste Management Plan prepared and periodically reviewed and revised every five years pursuant to chapter 70.95 RCW. For the duration of this Interlocal Agreement, each City authorizes the County to include in the Comprehensive Solid Waste Management Plan provisions for the management of solid waste generated in each City.

5. City Designation of County System for Solid Waste Disposal. By this Agreement each City hereby designates the County System for the disposal of all Solid Waste generated within the corporate limits of that City, and, within the scope of the Comprehensive Plan, authorizes the County to designate a disposal site or sites for the disposal of such Solid Waste generated within the corporate limits of that City except for (1) recyclable and other materials removed from solid waste by reduction or waste recycling activities under the Comprehensive Solid Waste Management Plan and (2) those wastes including hazardous or hard-to-handle wastes either prohibited by law or required by the Solid Waste Department to be specially handled. This designation of the County System shall continue in full force and effect for a period of twenty-one years after the effective date of this Interlocal Agreement except as provided in paragraph 11. The designation of the County in this section shall not reduce or otherwise affect each City's control over Solid Waste collection as permitted or required by applicable state law.

6. Manner of Financing and Budgeting.

6.1 Reimbursement for processing and disposal of solid waste. Island County will prepare and submit to City or its contract hauler on a monthly basis an invoice listing the weight in tons of solid waste delivered by City or contract hauler to the Coupeville Transfer Station. City will reimburse Island County for processing and disposing of this waste at the current disposal rate duly adopted by the Board of Island County Commissioners including a billing charge.

6.2 If hazardous waste of any origin, as defined in Chapter 173-303 WAC is found to be in a container of solid waste originating in City (whether from municipal collector or contract hauler) City will reimburse Island County the actual cost incurred in disposing of the hazardous waste at a permitted hazardous waste landfill.

6.3 Each party shall be responsible for budgeting and financing its own obligations under this agreement.

7. Waste Reduction and Recycling. The Cities and the County agree to cooperate to achieve the priorities for waste reduction and waste recycling set forth in the adopted Comprehensive Solid Waste Management Plan or subsequent adopted revisions.

8. Hazardous Waste Elimination. To extent required by Federal and State law, the city will establish operating procedures for elimination and management of hazardous waste for municipal collectors and contract collectors, and will prevent hazardous waste from either municipal collectors and/or contract collectors from being tranferred or delivered to Island County.

9. Duration. This Interlocal Agreement shall continue to be in full force and effect for twenty-one years from the effective date of this Agreement, unless terminated as described in paragraph 11.

10. No Separate Legal or Administrative Agency/Administration/Handling of Property.

10.1 No separate legal or administrative agency is created by this agreement.

10.2 Administration of this agreement shall be by the following:

Island County Solid Waste Director
P.O. Box 5000
Coupeville, WA 98239

[Langley]

[Coupeville]

Pat Nevins, City Supervisor

[Oak Harbor]

10.3 No personal or real property will be jointly acquired. Each party will be responsible for acquiring, holding and disposing of property, real and/or personal, to carry out the terms of this agreement.

11. Revision, Amendment, Supplementation or Termination. This Interlocal Agreement shall be reviewed by the parties every five years. At that time the terms of the Agreement may be revised, amended or supplemented upon agreement of all the parties. No revision, amendment or supplementation shall be adopted or put into effect if it impairs any contractual obligation of the County. This agreement may be terminated by either party prior to the expiration date in conjunction/coordination with the revision of the Comprehensive Plan as described in paragraph #4.

12. Miscellaneous.

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

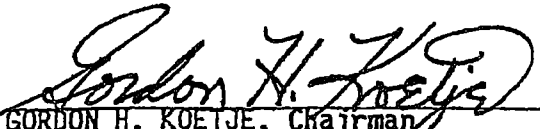
12.2 No other person or entity shall be entitled to be treated as a third party beneficiary of this Interlocal Agreement.

12.3 The effective date of this agreement is the date the last agreeing party affixes its signature.

12.4 Passage of this Interlocal Agreement rescinds any existing Interlocal Agreements in force dealing with the disposal of solid waste in Island County between the contracting parties.


INTERLOCAL AGREEMENT REGARDING
SOLID WASTE MANAGEMENT

SIGNED:


GORDON H. KOETJE, Chairman
Board of Island County Commissioners

Date: 12/23/91

City of Oak Harbor

By 
Mayor

Date: 12-20-91

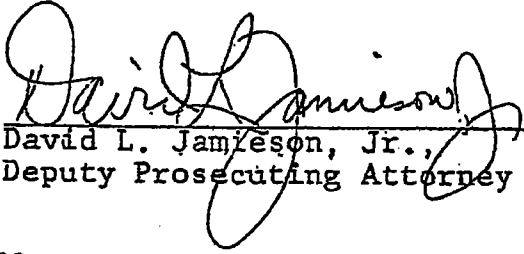
see agreement with Town of Coupeville
Town of Coupeville

By _____
Mayor
Date: _____

see agreement with Langley
City of Langley

By _____
Mayor
Date: _____

APPROVED AS TO FORM:


David L. Jamieson, Jr.,
Deputy Prosecuting Attorney

ee

INTERLOCAL AGREEMENT REGARDING
SOLID WASTE MANAGEMENT

1. RECITALS/PURPOSE

1.1 Island County and each of the Cities executing this Agreement are authorized and directed by Chapter 70.95 RCW to prepare a Comprehensive Solid Waste Management Plan, and are further authorized by Chapter 39.34 RCW to enter into an Interlocal Agreement for the administration and implementation of said Plan.

1.2 Island County has prepared a Comprehensive Solid Waste Management Plan which has been approved by the Washington State Department of Ecology and adopted by the Board of Island County Commissioners. The adopted plan includes a recycling element for the county and cities of the county.

1.3 Providing the most effective and efficient control of solid waste generated in Island County, including its cities, requires designation and use of the solid waste disposal system established by the county and the comprehensive plan of the county to the fullest extent possible. This interlocal agreement designates and provides for the use of that system by cities.

Island County and the undersigned cities agree as follows:

2. Definitions. For the purposes of this Agreement, the following definitions apply:

2.1 "City" means a City or Town located in Island County, Washington.

2.2 "Comprehensive Solid Waste Management Plan" or "Comprehensive Plan" means the Island County Comprehensive Solid Waste Management Plan, including a recycling element, as adopted by Island County on December 27, 1990, and as amended from time to time thereafter.

2.3 "County" means Island County, Washington.

2.4 "County System" means all facilities for solid waste handling owned or operated, or contracted for, by the County, and all administrative activities related thereto.

2.5 "Interlocal Agreement" means this Interlocal Agreement Regarding Solid Waste Management.

2.6 "Person" means an individual, firm, association, partnership, political subdivision, government agency, municipality, industry, public or private corporation, or any other entity whatsoever.

2.7 "Solid Waste" means solid waste as defined by RCW 70.95.030 (16) and WAC 173-304-100 (73) with the exception of wastes excluded by WAC 173-304-015 as now in effect or hereafter amended.

2.8 "Solid waste handling" means the management, storage, collection, transportation, treatment, utilization, processing, and final disposal of solid wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from such wastes or the conversion of the energy in such wastes to more useful forms or combinations thereof, and as such term may be modified by amendments to RCW 70.95.030(17).

3. Responsibilities for Solid Waste Disposal. For the duration of this Interlocal Agreement, the County shall be responsible for the disposal of all Solid Waste generated within unincorporated areas of the County and within each of the Cities signing this Agreement to the extent provided in the Comprehensive Solid Waste Management Plan. The County shall not be responsible for disposal of nor claim that this Agreement extends to Solid Waste that has been eliminated through waste reduction or waste recycling activities in conformity with the Comprehensive Solid Waste Management Plan.

4. Comprehensive Plan. For the duration of this Interlocal Agreement each City shall participate in the Comprehensive Solid Waste Management Plan prepared and periodically reviewed and revised every five years pursuant to chapter 70.95 RCW. For the duration of this Interlocal Agreement, each City authorizes the County to include in the Comprehensive Solid Waste Management Plan provisions for the management of solid waste generated in each City.

5. City Designation of County System for Solid Waste Disposal. By this Agreement each City hereby designates the County System for the disposal of a Solid Waste generated within the corporate limits of that City, and, within the scope of the Comprehensive Plan, authorizes the County to designate a disposal site or sites for the disposal of such Solid Waste generated within the corporate limits of that City except for (1) recyclable and other materials removed from solid waste by reduction or waste recycling activities under the Comprehensive Solid Waste Management Plan and (2) those wastes including hazardous or hard-to-handle wastes either prohibited by law or required by the Solid Waste Department to be specially handled. This designation of the County System shall continue in full force and effect for a period of twenty-one years after the effective date of this Interlocal Agreement except as provided in paragraph 11. The designation of the County in this section shall not reduce or otherwise affect each City's control over Solid Waste collection as permitted or required by applicable state law.

6. Manner of Financing and Budgeting.

6.1 Reimbursement for processing and disposal of solid waste. Island County will prepare and submit to City or its contract hauler on a monthly basis an invoice listing the weight in tons of solid waste delivered by City or contract hauler to the Coupeville Transfer Station. City will reimburse Island County for processing and disposing of this waste at the current disposal rate duly adopted by the Board of Island County Commissioners including a billing charge.

6.2 If hazardous waste of any origin, as defined in Chapter 173-303 WAC is found to be in a container of solid waste originating in City (whether from municipal collector or contract hauler) City will reimburse Island County the actual cost incurred in disposing of the hazardous waste at a permitted hazardous waste landfill.

6.3 Each party shall be responsible for budgeting and financing its own obligations under this agreement.

7. Waste Reduction and Recycling. The Cities and the County agree to cooperate to achieve the priorities for waste reduction and waste recycling set forth in the adopted Comprehensive Solid Waste Management Plan or subsequent adopted revisions.

8. Hazardous Waste Elimination. Cities will establish operating procedures for elimination and management of hazardous waste for municipal collectors and contract collectors, and Cities will prevent hazardous waste from either municipal collectors and/or contract collectors from being transferred or delivered to Island County.

9. Duration. This Interlocal Agreement shall continue to be in full force and effect for twenty-one years from the effective date of this Agreement, unless terminated as described in paragraph 11.

10. No Separate Legal or Administrative Agency/Administration/Handling of Property.

10.1 No separate legal or administrative agency is created by this agreement.

10.2 Administration of this agreement shall be by the following:

Island County Solid Waste Director
P.O. Box 5000
Coupeville, WA 98239

see agreement with City Of Langley [Langley]

Planner [Coupeville]

see amended agreement with Oak Harbor [Oak Harbor]

10.3 No personal or real property will be jointly acquired. Each party will be responsible for acquiring, holding and disposing of property, real and/or personal, to carry out the terms of this agreement.

11. Revision, Amendment, Supplementation or Termination. This Interlocal Agreement shall be reviewed by the parties every seven years. At that time the terms of the Agreement may be revised, amended or supplemented upon agreement of all the parties. No revision, amendment or supplementation shall be adopted or put into effect if it impairs any contractual obligation of the County. This agreement may be terminated prior to expiration date only by the mutual agreement of Island County and the affected city.

12. Miscellaneous.

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

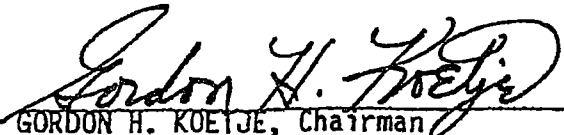
12.2 No other person or entity shall be entitled to be treated as a third party beneficiary of this Interlocal Agreement.

12.3 The effective date of this agreement is the date the last agreeing party affixes its signature.

12.4 Passage of this Interlocal Agreement rescinds any existing Interlocal Agreements in force dealing with the disposal of solid waste in Island County between the contracting parties.

INTERLOCAL AGREEMENT REGARDING
SOLID WASTE MANAGEMENT

SIGNED:


GORDON H. KOETJE, Chairman
Board of Island County Commissioners


Date: 12-7-91

see amended agreement with Oak Harbor
City of Oak Harbor

By _____
Mayor

Date: _____

Town of Coupeville

By 
Mayor

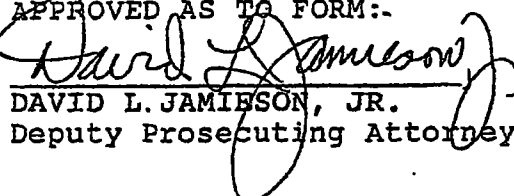
Date: 11-21-91

see agreement with City Of Langley
City of Langley

By _____
Mayor

Date: _____

APPROVED AS TO FORM:-


DAVID L. JAMIESON, JR.
Deputy Prosecuting Attorney

ee

INTERLOCAL AGREEMENT REGARDING

SOLID WASTE MANAGEMENT

1. RECITALS/PURPOSE

1.1 Island County and each of the Cities executing this Agreement are authorized and directed by Chapter 70.95 RCW to prepare a Comprehensive Solid Waste Management Plan, and are further authorized by Chapter 39.34 RCW to enter into an Interlocal Agreement for the administration and implementation of said Plan.

1.2 Island County has prepared a Comprehensive Solid Waste Management Plan which has been approved by the Washington State Department of Ecology and adopted by the Board of Island County Commissioners. The adopted plan includes a recycling element for the county and cities of the county.

1.3 Providing the most effective and efficient control of solid waste generated in Island County, including its cities, requires designation and use of the solid waste disposal system established by the county and the comprehensive plan of the county to the fullest extent possible. This interlocal agreement designates and provides for the use of that system by cities.

Island County and the undersigned cities agree as follows:

2. Definitions. For the purposes of this Agreement, the following definitions apply:

2.1 "City" means a City or Town located in Island County, Washington.

2.2 "Comprehensive Solid Waste Management Plan" or "Comprehensive Plan" means the Island County Comprehensive Solid Waste Management Plan, including a recycling element, as adopted by Island County on December 27, 1990, and as amended from time to time thereafter.

2.3 "County" means Island County, Washington.

2.4 "County System" means all facilities for solid waste handling owned or operated, or contracted for, by the County, and all administrative activities related thereto.

2.5 "Interlocal Agreement" means this Interlocal Agreement Regarding Solid Waste Management.

2.6 "Person" means an individual, firm, association, partnership, political subdivision, government agency, municipality, industry, public or private corporation, or any other entity whatsoever.

2.7 "Solid Waste" means solid waste as defined by RCW 70.95.030 (16) and WAC 173-304-100 (73) with the exception of wastes excluded by WAC 173-304-015 as now in effect or hereafter amended.

2.8 "Solid waste handling" means the management, storage, collection, transportation, treatment, utilization, processing, and final disposal of solid wastes, including the recovery and recycling of materials from solid wastes, the recovery of energy resources from such wastes or the conversion of the energy in such wastes to more useful forms or combinations thereof, and as such term may be modified by amendments to RCW 70.95.030(17).

3. Responsibilities for Solid Waste Disposal. For the duration of this Interlocal Agreement, the County shall be responsible for the disposal of all Solid Waste generated within unincorporated areas of the County and within each of the Cities signing this Agreement to the extent provided in the Comprehensive Solid Waste Management Plan. The County shall not be responsible for disposal of nor claim that this Agreement extends to Solid Waste that has been eliminated through waste reduction or waste recycling activities in conformity with the Comprehensive Solid Waste Management Plan.

4. Comprehensive Plan. For the duration of this Interlocal Agreement, each City shall participate in the Comprehensive Solid Waste Management Plan prepared and periodically reviewed and revised every five years pursuant to chapter 70.95 RCW. For the duration of this Interlocal Agreement, each City authorizes the County to include in the Comprehensive Solid Waste Management Plan provisions for the management of solid waste generated in each City.

5. City Designation of County System for Solid Waste Disposal. By this Agreement each City hereby designates the County System for the disposal of all Solid Waste generated within the corporate limits of that City, and, within the scope of the Comprehensive Plan, authorizes the County to designate a disposal site or sites for the disposal of such Solid Waste generated within the corporate limits of that City except for (1) recyclable and other materials removed from solid waste by reduction or waste recycling activities under the Comprehensive Solid Waste Management Plan and (2) those wastes including hazardous or hard-to-handle wastes either prohibited by law or required by the Solid Waste Department to be specially handled. This designation of the County System shall continue in full force and effect for a period of twenty-one years after the effective date of this Interlocal Agreement except as provided in paragraph 11. The designation of the County in this section shall not reduce or otherwise affect each City's control over Solid Waste collection as permitted or required by applicable state law.

6. Manner of Financing and Budgeting.

6.1 Reimbursement for processing and disposal of solid waste. Island County will prepare and submit to City or its contract hauler on a monthly basis an invoice listing the weight in tons of solid waste delivered by City or contract hauler to the Coupeville Transfer Station. City will reimburse Island County for processing and disposing of this waste at the current disposal rate duly adopted by the Board of Island County Commissioners including a billing charge.

6.2 If hazardous waste of any origin, as defined in Chapter 173-303 WAC is found to be in a container of solid waste originating in City (whether from municipal collector or contract hauler) City will reimburse Island County the actual cost incurred in disposing of the hazardous waste at a permitted hazardous waste landfill.

6.3 Each party shall be responsible for budgeting and financing its own obligations under this agreement.

7. Waste Reduction and Recycling. The Cities and the County agree to cooperate to achieve the priorities for waste reduction and waste recycling set forth in the adopted Comprehensive Solid Waste Management Plan or subsequent adopted revisions.

8. Hazardous Waste Elimination. Cities will establish operating procedures for elimination and management of hazardous waste for municipal collectors and contract collectors, and Cities will prevent hazardous waste from either municipal collectors and/or contract collectors from being transferred or delivered to Island County.

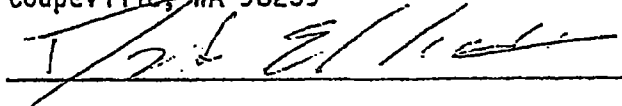
9. Duration. This Interlocal Agreement shall continue to be in full force and effect for twenty-one years from the effective date of this Agreement, unless terminated as described in paragraph 11.

10. No Separate Legal or Administrative Agency/Administration/Handling of Property.

10.1 No separate legal or administrative agency is created by this agreement.

10.2 Administration of this agreement shall be by the following:

Island County Solid Waste Director
P.O. Box 5000
Coupeville, WA 98239


[Langley]
see agreement with Coupeville [Coupeville]
see amended agreement with Oak Harbor [Oak Harbor]

10.3 No personal or real property will be jointly acquired. Each party will be responsible for acquiring, holding and disposing of property, real and/or personal, to carry out the terms of this agreement.

11. Revision, Amendment, Supplementation or Termination. This Interlocal Agreement shall be reviewed by the parties every seven years. At that time the terms of the Agreement may be revised, amended or supplemented upon agreement of all the parties. No revision, amendment or supplementation shall be adopted or put into effect if it impairs any contractual obligation of the County. This agreement may be terminated prior to expiration date only by the mutual agreement of Island County and the affected city.

12. Miscellaneous.

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

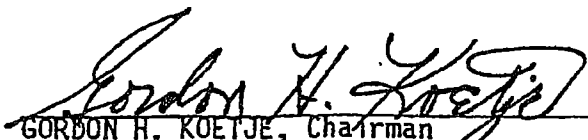
12.2 No other person or entity shall be entitled to be treated as a third party beneficiary of this Interlocal Agreement.

12.3 The effective date of this agreement is the date the last agreeing party affixes its signature.

12.4 Passage of this Interlocal Agreement rescinds any existing Interlocal Agreements in force dealing with the disposal of solid waste in Island County between the contracting parties.

INTERLOCAL AGREEMENT REGARDING
SOLID WASTE MANAGEMENT

SIGNED:


GORDON H. KOETJE, Chairman
Board of Island County Commissioners

Date: 12-9-91

see amended agreement with Oak Harbor
City of Oak Harbor

By _____
Mayor

Date: _____

see agreement with Town of Coupeville
Town of Coupeville

By _____
Mayor


Date: _____

City of Langley

By 
Mayor

Date: 11/20/91

APPROVED AS TO FORM:


DAVID L. JAMIESON, JR.
Deputy Prosecuting Attorney

ee

1999-2008

**ISLAND COUNTY AND NAVAL AIR STATION WHIDBEY ISLAND
COOPERATIVE SOLID WASTE MANAGEMENT AGREEMENT**

1. PURPOSE

Pursuant to Chapter 70.95 RCW, Island County has prepared a Comprehensive Solid Waste Management Plan which has been approved by the Washington State Department of Ecology and adopted by the Board of Island County Commissioners. Island County also developed a Moderate-Risk Waste Management Plan in accordance with Chapter 70.105 RCW. The purpose of this cooperative agreement is to provide for Navy use of the County's established household hazardous waste facilities and to establish a policy for emergency disposal of solid waste generated by Island County and by the Navy.

2. DEFINITIONS

The following definitions apply to this agreement:

- 2.1 "Comprehensive Solid Waste Management Plan" or "Comprehensive Plan" means the Island County Comprehensive Solid Waste Management Plan, as adopted by Island County on December 27, 1990, amended in May 1994, and as amended thereafter.
- 2.2 "Cooperative Agreement" means this Cooperative Agreement regarding solid waste management.
- 2.3 "County" means Island County, Washington.
- 2.4 "County System" means all facilities for household hazardous waste owned, operated, or contracted for by the County and all administrative activities related thereto.
- 2.5 "Household Hazardous Waste" means any discarded household product that contains hazardous substances. Hazardous substances include any liquid, solid, or contained gas generated within a household that possess any characteristics of a hazardous or dangerous waste under state or federal regulations.
- 2.6 "Person" means an individual, firm, association, partnership, political subdivision, government agency, municipality, industry, public or private corporation, or any other entity whatsoever.
- 2.7 "Solid Waste" means any solid waste as defined by RCW 70.95.030(16), and WAC 173-304-100(73) with the exception of wastes excluded by WAC 173-3-4-015 as now in effect or hereafter amended.

- 2.8 "Navy Family Housing" includes family residences owned, operated and maintained by NAS Whidbey Island in Island County. It does not include the NAS Whidbey Island Bachelor Enlisted Quarters or Bachelor Officer Quarters.

3. RESPONSIBILITIES

- 3.1 Should the Island County Transfer Station be rendered partially or wholly inoperable, NAS Whidbey Island shall permit to the extent feasible, the disposal of solid waste including treated infectious waste generated by Island County, in the NAS Whidbey Island Transfer Station. The Navy is responsible for identifying the amount of financial reimbursement required from Island County necessary to cover additional operating and disposal costs incurred in processing County solid waste, determining the volume of solid waste which the NAS Whidbey Island Transfer Station can accommodate, and identifying the length of time the Navy could assist in the processing of County solid waste given the regulatory and contractual framework within which the Navy must operate. This provision is intended to provide the County with short-term emergency aid in the disposal of solid waste as determined practical by NAS Whidbey. Island County shall, upon delivery of said waste, provide any invoices, manifests, or other documentation required under state and federal law. The amount and type of waste transferred shall be fully described.
- 3.2 Should the NAS Whidbey Island Transfer Station be rendered partially or wholly inoperable, Island County shall permit to the extent feasible, the disposal of solid waste including treated infectious waste generated by NAS Whidbey Island in the Island County Transfer Station. The County is responsible for identifying the amount of financial reimbursement required from NAS Whidbey Island necessary to cover additional operating and disposal costs incurred in processing Navy solid waste, determining the volume of solid waste which the Island County Transfer Station can accommodate, and identifying the length of time Island County could assist in the processing of Navy solid waste given the regulatory and contractual framework within which the County must operate. This provision is intended to provide Navy with short-term emergency aid in the disposal of solid waste as determined practical by Island County. Naval Air Station Whidbey Island (hereinafter "NAS Whidbey Island") shall, upon delivery of said waste, provide any invoices, manifests, or other documentation required under state and federal law. The amount and type of waste transferred shall be fully described.
- 3.3 By this cooperative agreement, military personnel and their dependents who reside in government quarters at NAS Whidbey Island may deliver household hazardous waste to the County collection points in the same manner as any other County resident, and the County shall be responsible for acceptance and disposal of this household hazardous waste.

4. DESIGNATION OF COUNTY SYSTEM FOR HOUSEHOLD HAZARDOUS WASTE DISPOSAL

By this agreement, NAS Whidbey Island hereby designates the County System for disposal of Household Hazardous Waste generated by residents of government quarters at NAS Whidbey Island. This designation shall continue in full force and effect until December 31, 2003.

5. MANNER OF FINANCING AND BUDGETING

Recognizing that County residents not residing in government quarters pay fees for disposal of household hazardous waste, NAS Whidbey Island agrees to the County a proportional cost of operation for the County's household hazardous waste program. This proportion is agreed to be the ratio of Navy Family Housing residents to total County population on October 1 of each year, which proportion shall apply to the following calendar year. Nothing in this agreement shall be construed to require the Navy to obligate funds in any fiscal year in contravention of the Anti-Deficiency Act, 31 U.S.C. 1341. It is further understood that should NAS Whidbey Island not fund a proportionate cost for the County's household hazardous waste program, this program may not be available to personnel residing in on-base housing at NAS Whidbey Island.

6. DURATION

This cooperative agreement shall remain in full force from the effective date of the agreement until December 31, 2003 unless terminated as described in paragraph 8.

7. NO SEPARATE LEGAL OR ADMINISTRATIVE AGENCY / ADMINISTRATION / HANDLING OF PROPERTY

7.1 No separate legal or administrative agency is created by this agreement.

7.2 Administration of this agreement shall be by:

Island County Solid Waste Director
P.O. Box 5000
Coupeville, WA 98239

and

Commanding Officer
Naval Air Station, Whidbey Island
Oak Harbor, WA 98278-5000

- 7.3 No personal or real property will be jointly acquired. Each party will be responsible for acquiring, holding, and disposing of property, real and/or personal, to carry out the terms of this agreement.

8. REVISION, AMENDMENT, SUPPLEMENTATION OR TERMINATION

The parties shall review this cooperative agreement after five years. At that time the terms of the agreement may be revised, amended, or supplemented upon agreement by both parties. No revision, amendment, or supplementation shall be adopted or put into effect if it impairs any contractual obligation of the County. This agreement may be terminated prior to the expiration date by either party upon 60 days written notice to the other party.

9. MISCELLANEOUS

- 9.1 No waiver by either party of any term or condition of this agreement shall be deemed or construed to constitute a waiver of any other term or condition or of any subsequent breach whether of the same or of a different provision of this agreement.
- 9.2 No other person or entity shall be entitled to be treated as a third party beneficiary of this agreement.
- 9.3 The effective date of this agreement is the date the last agreeing party affixes its signature.
- 9.4 Each party shall assume the risk of, be liable for, and pay all damage, loss, cost and expense of its officers, officials, and employees arising out of any duty performed or not performed, while acting in good faith within the scope of this agreement.
- 9.5 Each party agrees to indemnify and hold harmless the other, to the extent permitted by Federal and Washington State law, for any cause of action, sanction, or penalty arising from improperly disposing of hazardous waste in the other's Transfer Station as agreed upon in Paragraph 3 herein.

COOPERATIVE AGREEMENT REGARDING SOLID WASTE MANAGEMENT
NAS WHIDBEY ISLAND

[Signature]
I. J. Munns
Captain, U.S. Navy
Commanding Officer
Naval Air Station, Whidbey Island.

Date: 1/15/97

Island County Board
of County Commissioners



[Signature]
Mike Shelton, Chairman

[Signature]
Wm L. McDowell, Member

[Signature]
William F. Thorn, Member

DATE: 3/29/99

ATTEST: [Signature]
Margaret Rosenkranz
Clerk of the Board
BICC 99-188

Appendix D

Resolutions of Adoption

Resolutions adopting the Draft Final *Island County Solid Waste and Moderate-Risk Waste Management Plan* will be shown in this appendix.