ISLAND COUNTY SOLID WASTE AND MODERATE RISK WASTE MANAGEMENT PLAN

February 2020

GREEN SOLUTIONS
ENVIRONMENTAL CONSULTING

ISLAND COUNTY
SOLID WASTE AND
MODERATE RISK WASTE
MANAGEMENT PLAN

February 2020

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ACKNOWLEDGMENTS

This Island County Solid Waste and Moderate Risk Waste Management Plan incorporates the modifications put into practice since the previous solid waste plan was adopted in 2014, while looking forward to the future needs of Island County. The Island County Department of Public Works would like to thank the following organizations and those individuals who participated for their assistance in the development of this Plan:

- The cities and towns of Island County.
- The Island County Solid Waste Advisory Committee.
- Washington Department of Ecology staff.
- Island County Health and Planning Departments.
- Island County's Solid Waste Division staff.

Several Island County residents also contributed to this document through comments provided during public meetings and through various other channels. The Board of County Commissioners and the Public Works Department gratefully acknowledge this input by the citizens.

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This copy is designed for double-sided printing, with blank pages inserted where necessary so that chapters and other sections begin on the right-hand side. Please print two-sided (if you must print at all) and use recycled paper.

EXECUTIVE SUMMARY

ISLAND COUNTY SOLID WASTE AND MODERATE RISK WASTE MANAGEMENT PLAN

INTRODUCTION

This Island County Solid Waste and Moderate Risk Waste Management Plan (this "Plan") is intended to provide guidance for the solid waste system in Island County. The solid waste system includes garbage collection and disposal; programs for waste reduction, recycling, organics; compliance and enforcement; proper management of moderate risk waste; and the public education for and administration of those programs. This Plan provides guidance on program development and implementation for these activities for the next 6 years, while also attempting to anticipate the needs of the solid waste system for up to 20 years from now.

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

> "Each county within the State, in cooperation with the various cities located within such county, shall prepare a coordinated, comprehensive solid waste management plan" (RCW 70.95.080).

The Solid Waste Management Act also specifies that this Plan must "be maintained in a current condition" through periodic review and revisions (RCW 70.95.110).

GOALS OF THE PLAN

In addition to meeting the requirements of State law and other mandates, the goals established for this update of this Plan include developing and maintaining a solid waste management system that protects public health and the environment in a cost-effective manner; promoting effective waste handling methods; developing public and private partnerships; encouraging waste reduction and recycling; safely managing hazardous waste; and providing customers with information to promote recommended waste management practices.

OVERVIEW OF PLAN CONTENTS

Most of the chapters of this Plan address specific elements of the solid waste system, and the first two chapters provide basic information about Island County and the wastes generated. This Plan consists of the following chapters:

Introduction (Chapter 1): Chapter 1 of this Plan provides background information on the reasons for this Plan and the process for its development.

Background of the Planning Area (Chapter 2): Chapter 2 provides basic information on the demographics of Island County and on the amount and composition of the solid wastes produced by the residents and businesses in the county.

Waste Reduction (Chapter 3): Waste reduction includes methods that prevent waste from being created, while recycling and composting programs handle materials after those have been created as a waste. This Plan proposes continuing or beginning several waste reduction activities, including promoting reuse and smart shopping, safe substitutes for toxic products, avoiding food waste and encouraging more backyard composting.

Recycling (Chapter 4): The markets for recyclable materials are currently experiencing significant challenges. Because of these problems, this Plan recommends not expanding recycling programs until a later date, and for now addressing contamination issues, continuing to make changes in programs as necessary, and encouraging markets by using recycled products.

Organics (Chapter 5): The yard waste collection programs in Island County, and the mixed yard waste and food waste collection program on Camano Island, are working well but could benefit from more public education to address contamination issues. The collection program on Camano Island could also be promoted more, as the participation rate is fairly low and there is anecdotal evidence to suggest that residents are not aware of it. There is also some interest in composting yard waste, possibly with food waste, at the Island County Solid Waste Complex in Coupeville.

Solid Waste Collection (Chapter 6): Garbage collection is a fundamental service, and Island County and the cities and towns are well-served by an appropriate mix of waste collection programs. A few refinements would be helpful, such as promoting voluntary subscription to routine garbage collection with a focus on the cost savings associated with curbside collection.

Transfer and Disposal (Chapter 7): The Island County Solid Waste Complex, Camano Transfer Station and two drop box facilities comprise the disposal system for all solid wastes from Island County (excluding the Navy base, which has its own disposal system). This chapter primarily recommends the need for a new waste export and disposal contract, the process for which should begin in 2021, and the possible need for additional capacity at the Island County Solid Waste Complex.

Moderate Risk Wastes (Chapter 8): Moderate risk waste (MRW) refers to waste materials that pose the same risks as hazardous wastes, but are generated in small quantities by individual households and businesses. These wastes are flammable, corrosive, toxic, and/or reactive. The handling of MRW is largely regulated by federal and state rules and this Plan recommends supporting future legislation that is consistent with Island County programs. The Plan also recommends the continued efforts to restore grants and programs that support proper MRW management.

Miscellaneous Waste (Chapter 9): This chapter of the Plan addresses specific wastes that merit special attention, including asbestos, biomedical wastes, biosolids and septage, cannabis-related wastes, construction and demolition waste, petroleum-contaminated soils and pharmaceuticals. A few recommendations are provided as appropriate to the recycling or disposal needs for that waste or material.

Administration and Public Education (Chapter 10): The Island County Public Works Department, Public Health Department, state and regional agencies, and various departments of the cities and towns are involved in solid waste management. These entities provide specific services and, in some cases, also enforce regulations. This chapter discusses the input provided by the Solid Waste Advisory Committee (SWAC) and the education and outreach conducted by the Washington State University (WSU) Extension Service. The Plan recommends continuing to take measures to ensure funding for solid waste management programs, conducting a periodic rate study, and a few other activities.

Implementation (Chapter 11): This chapter lists all of the recommendations of this Plan and provides additional details for their implementation, including the lead agencies, schedule and costs. Priorities have been assigned to each recommendation to aid in developing future budgets and workloads. This chapter also describes how amendments to this Plan can be conducted.

RECOMMENDATIONS AND IMPLEMENTATION DETAILS

Table ES-1 shows the implementation responsibilities, priorities, schedule and costs for the recommendations shown in Chapters 3 through 10. Recommendations have been assigned a level of priority (high, medium or low) to provide guidance for future work plans and budgets. Specific costs for some recommendations have not been calculated at this time and will instead be determined through annual budgets and work plans. The funding source for almost all of the recommendations is tipping fees, with grant funds also being used when available to supplement tipping fees.

The recommendations have been abbreviated to fit into Table ES-1, and additional details about the meaning and intent of the recommendations can be found in the appropriate chapter of the plan.

Table ES-1. Implementation Summary for Recommendations				
Recommendation	**Lead Agency**	**Priority**	**Schedule**	**Annual Cost**
Waste Reduction				
WR1) Continue to promote activities such as reuse and smart shopping.	SW and WW	High	Ongoing	Existing
WR2) Continue to encourage safer substitutes for toxic products.	SW and WW	High	Ongoing	Existing
WR3) Conduct public education about wasted food.	SW and WW	Medium	2019 and on	$5,000
WR4) Conduct repair cafes.	SW and WW	Low	2020 and on	$6,000
WR5) Continue to promote clothing reuse.	SW and WW	Medium	2019 and on	$3,000
WR6) Promote reuse of construction materials.	SW and WW	High	2019 and on	$5,000
WR7) Discourage single-use plastic products.	SW and WW	Medium	2019 and on	$3,000
WR8) Promote more backyard composting.	SW and WW	Medium	2019 and on	$3,000
Recycling				
R1) Implement curbside recycling in Langley and Freeland in the future.	ID	High	2020 and on	TBD
R2) Consider expanding curbside recycling programs at a later date.	ID	High	2020 and on	TBD
R3) Continue to change recycling programs based on marketability.	SW, haulers, IR	Very high	Ongoing	TBD
R4) Contamination should be addressed through more public education.	Haulers	High	2019 and on	$15,000
R5) Local agencies should use products with recycled content.	County, cities	High	Ongoing	NA
Organics				
O1) Investigate the possibility of composting at ICSWC.	SW	Medium	2020	TBD
O2) Promote the mixed organics program on Camano Island.	WM	High	2019 and on	$10,000
O3) Conduct more public education for collection programs to reduce contamination.	OH, WM, ID	High	2019 and on	$10,000
O4) Encourage markets for compost.	SW	Low	2019 and on	NA
Waste Collection				
WC1) Continue to promote voluntary garbage collection services.	ID, WM, SW	High	Ongoing	Existing
Transfer and Disposal				
T&D1) The four transfer stations and drop box facilities will continue to be the designated disposal system for Island County solid waste.	SW	High	Ongoing	NA

Notes: SW = Island County Solid Waste. WW = WSU Extension Waste Wise Program. Haulers = Island Disposal (ID), Oak Harbor (OH) and Waste Management (WM). IR = Island Recycling. TBD = to be determined. Cities = Coupeville, Langley and Oak Harbor. NA = not applicable.
The level of priority shown for each recommendation was determined by the SWAC on November 16, 2018.
Recommendations have been abbreviated to fit into this table.

Table ES-1. Implementation Summary for Recommendations, continued				
Recommendation	**Lead Agency**	**Priority**	**Schedule**	**Annual Cost**
Transfer and Disposal, continued				
T&D2) A study should be conducted for additional capacity at ICSWC.	SW	Medium	2019 - 2020	$50,000
T&D3) A waste export and disposal RFP should be prepared.	SW	High	Begin 2021	Staff time
T&D4) Continue to examine options to reduce or eliminate ground water monitoring at the old Coupeville landfill.	SW	Low	Ongoing	NA
T&D5) Evaluate future proposals for new technologies on a case-by-case basis.	SW	Medium	Ongoing	NA
Moderate Risk Wastes				
MRW1) Support new product stewardship legislation.	SW	Medium	Ongoing	NA
MRW2) Continue collaborative efforts to restore MTCA and LSWFA funding.	SW	High	Ongoing	NA
Miscellaneous Wastes				
MW1) The needle exchange program should be continued.	PH	High	Ongoing	Existing
MW2) Conduct a pilot project for composting biosolids with yard waste.	SW	High	2019-2020	TBD
MW3) Continue to seek a cost-effective market for wood waste.	SW	Medium	Ongoing	NA
Administration and Public Education Wastes				
A&E1) Ensure sufficient funding needed to repair, maintain, and replace solid waste infrastructure.	SW	High	Ongoing	NA
A&E2) Ensure sufficient funding needed to continue education and outreach.	SW	High	Ongoing	NA
A&E3) Seek grant funding to support waste diversion and prevention programs.	SW	Medium	Ongoing	NA
A&E4) County codes should be updated for changes in State law.	SW, PH	High	2019	NA
A&E5) A subcommittee of the SWAC should be created to address consistent messaging.	SW	Medium	2019	NA
A&E6) A rate study should be conducted in 2021-2023.	SW	High	2021-2023	$30,000

Notes: SW = Island County Solid Waste. NA = Not Applicable. PH = Public Health. TBD = to be determined.
The level of priority shown for each recommendation was determined by the SWAC on November 16, 2018.
Recommendations have been abbreviated to fit into this table.

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CHAPTER 1

INTRODUCTION

1.1. ROLE AND PURPOSE

This Solid Waste and Moderate Risk Waste Management Plan ("this Plan") is intended to guide solid waste and moderate risk waste programs in Island County. This document was prepared in response to the Solid Waste Management Act, Chapter 70.95 of the Revised Code of Washington (RCW), which states:

> "Each county within the State, in cooperation with the various cities located within such county, shall prepare a coordinated, comprehensive solid waste management plan" (RCW 70.95.080).

The Solid Waste Management Act also specifies that these plans must "be maintained in a current condition" through periodic review and revisions (RCW 70.95.110), hence the need for this update to the previous plan.

1.2. MATERIALS ADDRESSED BY THIS PLAN

Solid waste can be divided into categories based on regulatory requirements and handling methods. In this plan, solid waste is divided into three categories:

- Municipal solid waste (MSW), which includes typical garbage and recyclables generated by households, businesses, and institutions in Island County. This is the largest category of solid waste and most of this plan is directed at this type of waste.
- Moderate risk waste (MRW), which are potentially hazardous wastes generated in small quantities by households and commercial sources and that require special handling due to toxicity, flammability, and other hazardous characteristics. If generated in large quantities, these materials are regulated as hazardous wastes, which are managed separately from solid wastes and are not included in this Plan.
- Other wastes that are managed separately from MSW due to special characteristics, such as septage, biomedical wastes, and construction and demolition wastes.

1.3. PARTICIPATING JURISDICTIONS

Chapter 70.95 RCW delegates the authority and responsibility for the development of solid waste management plans to the counties. State law allows cities to fulfill their solid waste management planning responsibilities in one of three ways:

- By preparing their own plan for integration into the county's plan.
- By participating with the county in preparing a joint plan.
- By authorizing the county to prepare a plan that includes the city.

In this case, the Cities of Langley and Oak Harbor and the Town of Coupeville have agreed to participate in the planning process through an interlocal agreement (see Appendix A). These agreements have authorized Island County to prepare a countywide solid waste plan that includes the three municipalities. Representatives of the Cities of Langley and Oak Harbor and the Town of Coupeville also participated in this process through the Solid Waste Advisory Committee.

Other governing bodies (such as Tribes and Federal agencies) may participate in a county's planning process at their option. There are no known Tribal properties currently in Island County, although several Tribes (primarily the Swinomish Indian Tribal Community) have historical interests in the area. The most significant Federal facility in Island County is Naval Air Station Whidbey Island (NASWI). NASWI and their contractors use a separate collection and disposal system for their solid wastes. There is an interlocal agreement with Island County that allows MRW from NASWI to be brought to Island County's facilities where MRW is collected. The U.S. Navy and other federal agencies are encouraged to review this plan because of the potential impacts on their operations.

1.4. REQUIRED MINIMUM CONTENTS OF PLAN

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

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

- An assessment of the impact that implementation of the recommendations will have on solid waste collection costs.
- A review of potential sites for solid waste disposal facilities.
- Other details for specific programs and activities.

Because this is a combined solid and moderate risk waste management plan, Washington State law pertaining to local hazardous waste plans (RCW 70.105.220) is also applicable. Specific components that are required for local hazardous waste plans include:

- A program to manage moderate risk wastes from households and businesses.
- An ongoing public education program.
- An inventory of existing hazardous waste generators and facilities to manage hazardous waste (based on data provided by Ecology).
- A description of the public involvement process used in developing the plan.
- A used oil recycling element (per RCW 70.95I).
- A description of the eligible zones designated in accordance with RCW 70.105.225.
- Other elements deemed appropriate by local government.

These components are addressed in Chapter 8 of this Plan to the extent necessary and possible.

1.5. RELATIONSHIP TO OTHER PLANS

This Plan must function within a framework created by other plans and programs, including policy documents and studies that deal with related matters. One of the more important of these documents is the Island County Comprehensive Plan.

1.6. PREVIOUS SOLID WASTE PLANS

Island County and the cities adopted the first Island County Comprehensive Solid Waste Management Plan in February of 1991, and that plan was later amended in 1994. The first Island County Moderate-Risk Waste Management Plan was also adopted in 1991. In 2000, the solid waste and moderate risk waste plans were combined in the Island County Comprehensive Solid Waste and Moderate-Risk Waste Management Plan. That plan was updated in 2008, and then amended in 2014.

Table 1-1 shows the recommendations from the 2014 plan and the status of those recommendations as of May 2018.

Table 1-1. Status of Recommendations from the 2014 Plan	
Recommendation	**Status***
Waste Reduction	
Adult Education and Promotion.	Ongoing
Youth Education.	Ongoing
Financial Support for Reuse Organizations.	Ongoing
Recycling	
Implement Additional Curbside Recycling.	Ongoing
Promote Private Yard Waste Diversion.	Ongoing
Investigate Local Markets for Glass.	Accomplished
Investigate Local Markets for other Materials.	Ongoing
Continue to Pursue Co-Generation Options for Wood Waste.	Ongoing
Encourage Food Waste Composting.	Ongoing
Collection	
Promote Curbside Waste Collection Services.	Ongoing
Investigate Alternative Waste Collection Methods.	Ongoing
Transfer	
Upgrade the North Whidbey Drop Box Station.	Accomplished
Increase Capacity at the Camano Transfer Station.	Ongoing
Increase Capacity at the Bayview Drop Box Station.	Ongoing
Continue to Explore and Develop Increased Efficiencies at Camano Transfer Station.	Ongoing
Consider a New Transfer Station for Camano Island and/or Coupeville.	Ongoing
Increase or Modify Rates to Ensure Self-Sustaining Programs.	Ongoing
Transport and Disposal	
Purchase Additional Buffer Areas.	Ongoing
Investigate Off-Ramp Strategies.	Ongoing
Investigate Additional Methods for Densifying Waste.	Ongoing
Moderate Risk Wastes	
Public Education for Household Hazardous Waste.	Ongoing
Education and Technical Assistance for Small Quantity Generators.	Ongoing
Other Special Wastes	
Investigate Diversion Options for Demolition Debris.	Determined to be Not Cost Effective
Adopt Contingency Plan for Disaster Debris.	Ongoing
Alternative Collection Programs for Special Wastes.	Ongoing
Administration	
Maintain Target Balance for Working Capital.	Accomplished
Conduct Phase 2 of Benchmarking Study.	To be done in 2019
Regulation	
Discourage Illegal Dumping and Littering.	Ongoing
Promote and Enforce Secure Load Requirements.	Ongoing
Add Administrative Penalties to County Code, Increase Fines.	Ongoing

Notes: Many of the above recommendations have been abbreviated due to space constraints, see the previous plan for the full text of the recommendations.
* Status shown is as of May 2018.

1.7. SOLID WASTE ADVISORY COMMITTEE

The formation, membership makeup, and role of solid waste advisory committees are specified by State law (RCW 70.95.165 (3)):

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

As required by State law, the Island County Solid Waste Advisory Committee (SWAC) includes individuals representing various interests in solid waste issues. The members represent not only the interests of their respective agencies and businesses, but as residents and members of the community they also represent the public's interest. The SWAC functioned in a review and advisory capacity throughout the plan development process. The current membership (as of May 2018) and affiliations of the SWAC members are shown in Table 1-2.

Table 1-2. Membership of the Island County SWAC

Members	Area of Representation
Joantha Guthrie, SWAC Chair	Island County Solid Waste
Richard M. Hannold	Island County Commissioner
Joe Grogan	Town of Coupeville
Stan Berryman	City of Langley
Steve Bebee	City of Oak Harbor
Alan Schaible	Refuse Industry, Waste Management
Michelle Trimbur	Refuse Industry, Waste Connections
Rick Blank	Member at Large, North Whidbey
Andrea Krohn	Island County Public Health
Liz Kennedy Ketcheson	Member at Large, Central/South Whidbey
Dave Campbell	Recycling Industry, Island Recycling
Scott Sebelsky	Member at Large, Camano Island
Sara Bergquist	Member at Large, Whidbey Island
Loren Imes	Agricultural Representative
Diana Wadley, ex officio	WA Dept. of Ecology

Current as of May 2018.

1.8. PROCESS FOR UPDATING THIS PLAN

The process of updating and adopting this Plan consisted of the following steps:

- An initial meeting was held with Island County Solid Waste staff and the SWAC.
- Draft chapters were developed and reviewed with Island County staff and the SWAC.
- After all of the chapters were reviewed by the SWAC, they were compiled into a complete draft for review and comment by SWAC members and County staff. After this review and the subsequent revisions, the draft plan became the "Preliminary Draft."
- A SEPA checklist was prepared for the Preliminary Draft Plan.
- A Cost Assessment Questionnaire was prepared for review by the Washington Utilities and Transportation Commission (UTC).
- The Preliminary Draft Plan, SEPA checklist and Cost Assessment Questionnaire were released for review by the public, Ecology, Department of Agriculture and UTC. The release of the Plan was publicized using a newspaper ad and postings to the County's website, and a public hearing was held during the review period to further solicit public comments.
- Comments received on the Preliminary Draft from the public, municipalities, UTC, Ecology and other interested parties were reviewed with the SWAC and then incorporated into the plan to produce the Final Draft Plan.
- The Final Draft Plan was offered for adoption by the cities, towns and Island County.
- After local adoption, the Final Plan was submitted with resolutions of adoption to Ecology for final approval.
- After final approval by Ecology, the process of updating the Plan is complete and the implementation period for the new Plan begins.

Public participation was encouraged throughout this process. Among other activities, the following steps were taken to encourage public input during the planning process:

- A press release was distributed at the start of the process to notify the community and encourage participation,
- Public comments were solicited at each of the SWAC meetings,
- Information about the Plan and process was posted on Island County's website, along with periodic updates, and
- As noted in the above list of process-related steps, additional steps were taken when the preliminary draft plan was released for public review and comment.

1.9. POLICY GUIDANCE FOR THE PLAN

The overall 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 goals of this solid and moderate risk waste management plan are to:

- Promote effective waste handling methods with respect to cost and environmental

protection.

- Develop public-private partnerships for waste reduction and recycling programs.
- Emphasize waste reduction and recycling as fundamental management strategies.
- Encourage the recovery of marketable resources from solid waste.
- Assist the State to achieve its solid and hazardous waste management goals.
- Assist those who sell and use products containing hazardous ingredients to minimize risks to public health and the environment.
- Provide customers information and education to promote recommended waste management practices.

These goals were used to evaluate the alternatives for new or revised programs that are discussed in this Plan.

1.10. ORGANIZATION OF THE PLAN

This Plan is organized into the following chapters:

Executive Summary
Chapter 1: Introduction
Chapter 2: Background
Chapter 3: Waste Reduction
Chapter 4: Recycling
Chapter 5: Organics
Chapter 6: Solid Waste Collection
Chapter 7: Transfer and Disposal
Chapter 8: Moderate Risk Wastes
Chapter 9: Miscellaneous Wastes
Chapter 10: Administration, Regulation and Public Education
Chapter 11: Implementation Chapter
Glossary
Appendices

Chapter 1 is intended to address the reasons and requirements for this Plan, and also addresses important aspects of the planning process. Chapter 2 provides basic information about demographics, waste quantities and other factors common to the remaining chapters. Chapters 3 through 10 address particular elements of Island County's solid waste management system in order to:

- Review existing programs, activities and policies in Island County and the cities for each element of the solid waste system.
- Identify any outstanding issues (i.e., needs, problems, or opportunities) that are not addressed by existing activities and programs.
- Identify alternatives to address the issues.

- Recommend future programs or actions as appropriate to the needs and abilities of the County's and Cities' residents, businesses and service-providers.

Chapter 11 contains all of the recommendations from each chapter and provides information about the schedule and responsibilities for implementing the recommendations. The appendices to this plan contain information relevant to the planning process, including the Interlocal Agreements, description of siting factors, UTC Cost Assessment Questionnaire, SEPA Checklist, comments received on the Preliminary Draft plan and responses to those, and resolutions of adoption.

1.11. STANDARD NOMENCLATURE USED IN THE PLAN

This Plan attempts to provide a standardized approach for the use of capitalized letters when referring to government agencies, including:

- City: When capitalized, this refers to a particular city. When not capitalized, it simply refers to cities or city authority in general.
- County: When not capitalized, this refers to counties or county authority in general. When capitalized, this refers specifically to Island County. In the latter case, the term may apply to the County government, to the unincorporated area outside of the City, or to the entire County (including the cities).
- Ecology: When capitalized, this refers to the Washington Department of Ecology.
- State, Federal and Tribes: These words are almost always capitalized on the grounds that these almost always refer to a specific entity.

More information about the definitions for words used in this Plan can be found in the Glossary.

CHAPTER 2

BACKGROUND OF THE PLANNING AREA

2.1. INTRODUCTION

This chapter provides basic information on demographics and on the amount and composition of solid waste (garbage) in Island County. This information is required by Ecology's guidelines and is used in several of the following chapters of this Plan. Additional information about the physical and environmental characteristics of the County, including information relevant to the siting of solid waste facilities, is provided in Appendix B.

2.2. DEMOGRAPHICS

Current Population and Demographics

Population data for the cities and areas in Island County is shown in Table 2-1. The figures for 2010 are from the U.S. Census and figures for 2017 are estimates provided by the Office of Financial Management (OFM). As shown in Table 2-1, Island County had an estimated population of 82,790 people in 2017. The three cities and towns in Island County had 25,910 residents in 2017, or 31.3% of the total population of the county. In other words, only about one-third of the residents of Island County live in incorporated areas.

The figures in Table 2-1 include the population of Naval Air Station Whidbey Island, although these people are not in the planning area for this document. Figures for this population are not officially available but potentially includes up to 1,700 people in the "bachelor housing"

Table 2-1. Island County Population by Area

Area	2010 Population	2010 Percentage	2017 Estimated Population	2017 Percentage
Incorporated Areas	**24,941**	**31.8%**	**25,910**	**31.3%**
Coupeville	1,831	2.3%	1,905	2.3%
Langley	1,035	1.3%	1,165	1.4%
Oak Harbor	22,075	28.1%	22,840	27.6%
Unincorporated Areas	**53,565**	**68.2%**	**56,880**	**68.7%**
Camano Island	15,650	19.9%	16,578	20.0%
Other Unincorporated	37,915	48.3%	40,302	48.7%
Total Population	**78,506**		**82,790**	

Sources: Data is from the Office of Financial Management (OFM), including April 1, 2017 Population of Cities, Towns and Counties and Estimates of Total Population for Selected Islands by County Parts. Figures shown for "Other Unincorporated" is the difference (remainder) of the total population minus the other areas.

units plus families living in another 1,500 housing units on government property on or near the base. At typical family sizes for this area (2.4 people per household), altogether there could be up to approximately 5,000 people in all types of navy base housing units.

Future Population/Demographics

Evaluating growth trends in an area's population is useful in determining future trends in solid waste generation. Table 2-2 shows historical and projected population figures for Island County. As shown in Table 2-2, the population of Island County is expected to increase significantly by 2040. The projected 2040 population of Island County (94,461 people) represents a 17% increase over the current (2015) estimated population. The figures shown in Table 2-2 for 2020 and beyond are from the Office of Financial Management (OFM) and are based on the "medium series" projections.

Table 2-2. Island County Population Trends

Year	Total Population	Annual Increase
Historical:		
1960	19,638	---
1970	27,011	3.8%
1980	44,048	6.3%
1990	60,195	3.7%
2000	71,558	1.9%
2005	75,591	1.1%
2010	78,506	0.8%
2015	80,600	0.5%
Projected:		
2020	84,044	0.9%
2025	87,297	0.8%
2030	89,848	0.6%
2035	92,133	0.5%
2040	94,461	0.5%

Notes: Data is from Projections of the Total Population for Growth Management, 2017 GMA Projections, Medium Series, by the Washington State Office of Financial Management (OFM).

2.3. ECONOMY

A major driving force for Island County's economy continues to be Naval Air Station Whidbey Island (NASWI). NASWI employs many people directly and also creates many more associated jobs. Employment figures for 2017 are shown in Table 2-3, but these figures do not include military employment. Military employment has been previously estimated at about 8,000 people, which would increase the total employment in Island County by 50% over the figures shown in Table 2-3.

Table 2-3. Employment by Type of Business in Island County (2017)			
Business Type	**Number of Employees**	**Percentage in Island County**	**Statewide Percentage**
Agricultural, Forestry and Fishing	195	1.2%	3.2%
Mining	NA	NA	0.1%
Utilities	NA	NA	0.2%
Construction	958	5.9%	4.7%
Manufacturing	828	5.1%	9.6%
Wholesale Trade	149	0.9%	4.2%
Retail Trade	2,141	13.2%	11.0%
Transportation and Warehousing	258	1.6%	2.8%
Information	165	1.0%	3.6%
Finance and Insurance	263	1.6%	3.0%
Real Estate	348	2.1%	1.5%
Professional and Technical Services	583	3.6%	5.8%
Management Services	NA	NA	1.3%
Administrative, Support, Waste Management	586	3.6%	4.9%
Educational Services	307	1.9%	1.3%
Health Care and Social Services	1,798	11.1%	11.4%
Arts, Entertainment and Recreation	332	2.1%	1.5%
Accommodation and Food Services	2,043	12.6%	8.0%
Other Services	647	4.0%	4.5%
Government (Federal, State and Local)	4,590	28.3%	17.5%
Total	**16,356**		

Source: Data is from the Washington Employment Security Department. The number of employees shown are annual averages for 2017. The figures above do not include military employment. NA = Data not available.

2.4. QUANTITY AND COMPOSITION OF SOLID WASTE

An analysis of the current and future quantities of solid waste in Island County is necessary to provide the basis for determining solid waste handling needs for the next twenty years. Composition data is also helpful for this, and for evaluating existing waste diversion programs as well as designing new programs.

This Plan focuses primarily on "municipal solid waste" (MSW), which are those wastes generated by residents and businesses and that are handled through the County's solid waste disposal system. The total waste stream for Island County consists of many types of wastes, almost all of which are classified as MSW and are handled through the County system and then transferred to a large regional landfill in Klickitat County, Washington. Some wastes generated by industrial and agricultural sources are handled separately from the solid waste disposal system. Various other wastes (such as hazardous wastes and biomedical wastes) are also

handled through separate collection and disposal systems. Large quantities of hazardous wastes are handled through a separate system and so are not addressed in this Plan, but hazardous wastes generated by households and in small quantities by non-residential sources (known as moderate risk wastes, or MRW) are handled through the County's waste disposal system. More details on the amounts and types of MRW and other wastes that merit special attention can be found in the chapters dealing with those materials (see Chapters 8 and 9).

Past and Present Solid Waste Quantities

The solid waste disposed at Island County facilities is brought there by a variety of customers, including two private haulers (Waste Connections on Whidbey Island and Waste Management on Camano Island), a municipal hauler (the City of Oak Harbor), and many residential and commercial customers that are hauling their own wastes ("self-haul"). Table 2-4 shows the amount of wastes from the various sources in Island County for 2017.

Table 2-4. Island County Waste Tonnages (2017)

Source	Annual Tons	Percent
Haulers	**30,704.3**	**57.9%**
City of Oak Harbor	8,693.8	16.4%
Waste Connections	18,249.7	34.4%
Waste Management	3,760.8	7.1%
Self-Haul	**22,332.1**	**42.1%**
Bayview Dropbox	793.1	1.5%
Camano Transfer Station	6,128.0	11.6%
Coupeville Solid Waste Complex	15,144.0	28.6%
North Whidbey Dropbox	267.0	0.5%
TOTAL	**53,036.4**	**100.0%**

Notes: Data is from Island County records, for inbound tonnages of MSW, tires and appliances.

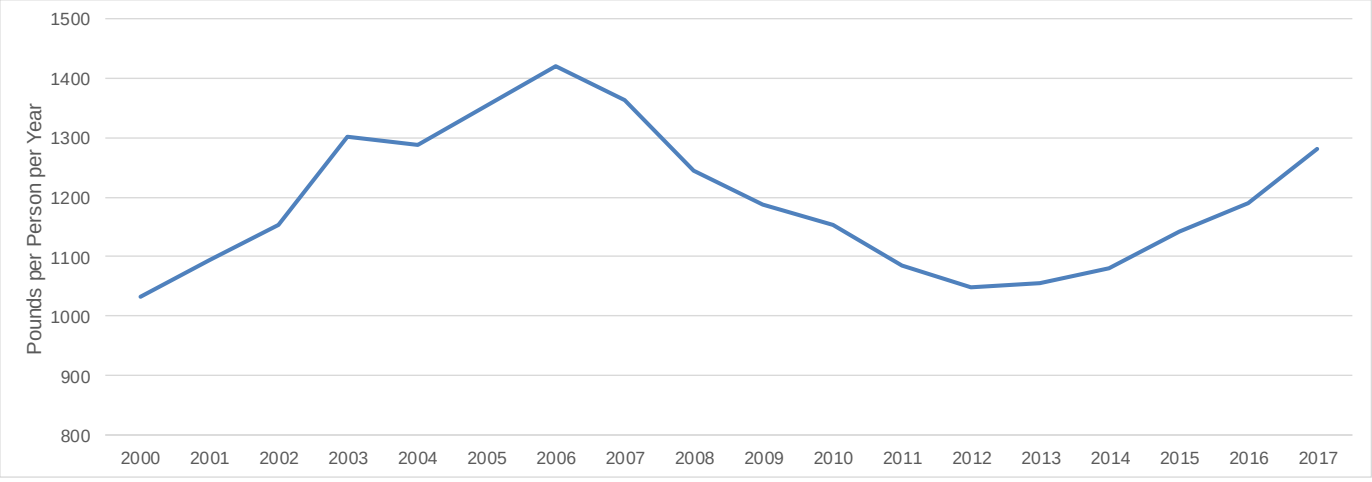
Island County's waste stream has fluctuated significantly over the past 20 years. Table 2-5 shows the annual waste quantities for the past 20 years and the amount of change from the previous year. These figures do not include wastes that are handled separately from the municipal solid waste stream (such as biomedical wastes) or wastes that are exported directly to out-of-county facilities. For instance, Ecology records show that 2,469 tons of asbestos, construction and demolition debris, and petroleum-contaminated soils were exported directly out of the county in 2015.

As can be seen in Table 2-5, there have been significant fluctuations in the amount of wastes in some years. Waste tonnages had been increasing fairly steadily until 2007, and then decreased in 2008 to 2014 due to the recession. Solid waste tonnages have only recently returned to pre-recession levels. These fluctuations can be seen in Figure 2-1, which shows the per capita disposal rates since the year 2000.

Table 2-5. Annual Disposal Tonnages		
Year	**Total Waste, TPY**	**Percent Change**
1997	29,695	
1998	31,682	6.7%
1999	34,574	9.1%
2000	36,938	6.8%
2001	39,458	6.8%
2002	42,151	6.8%
2003	47,901	13.6%
2004	48,012	0.2%
2005	51,464	7.2%
2006	54,787	6.5%
2007	53,323	-2.7%
2008	48,894	-8.3%
2009	46,776	-4.3%
2010	45,257	-3.2%
2011	42,717	-5.6%
2012	41,604	-2.6%
2013	42,075	1.1%
2014	43,250	2.8%
2015	46,054	6.5%
2016	49,296	7.0%
2017	53,036	7.6%

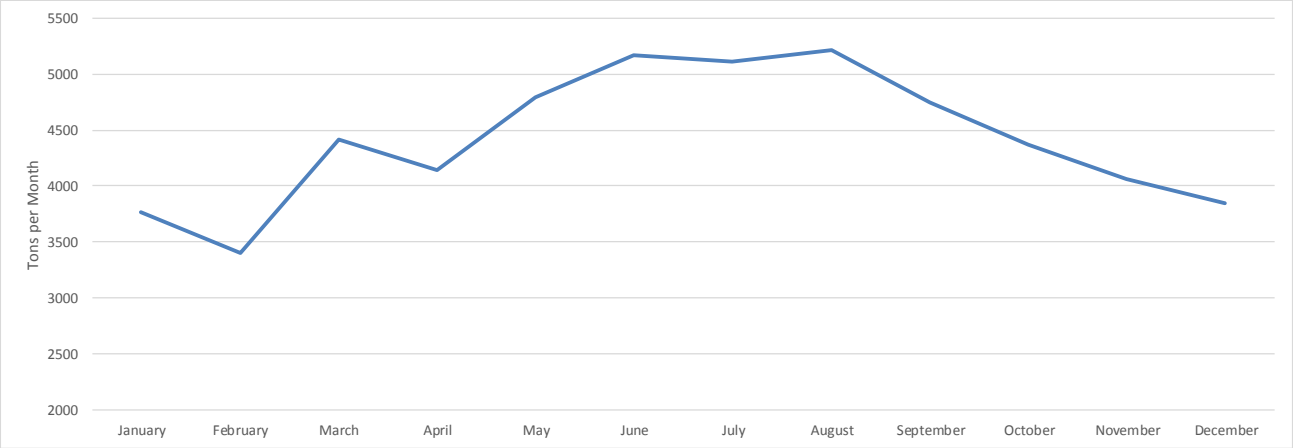
Source: Island County records, for inbound MSW only.

Figure 2-1
Per Capita Disposal Rates



The rate at which solid waste is generated varies throughout the year due to seasonal differences in residential and commercial activities. Data from Island County records shows that the amount of solid waste disposed in any one month in 2017 varied from a low of 3,397 tons in February to a high of 5,213 tons in August (see Figure 2-2). This is a typical pattern for many areas, with the lowest amounts of wastes being disposed in the winter months (after the impact of the holiday season has been experienced) and then higher amounts in the summer (especially in areas with a significant amount of tourism).

Figure 2-2
Solid Waste, Tons per Month (2017)



Based on Island County records for 2017.

Current Recycling Levels

The most recent recycling survey conducted by Ecology shows that 24,385 tons of materials were recycled in 2016 from Island County residences and businesses, which was similar to the previous year. Table 2-6 shows the tonnages of materials recycled for the past three years (2014-2016), and the average of those three years. These figures should be viewed with some caution, as the data is based on a survey that depends on voluntary self-reporting by the collectors and processors. The amount of cooperation and the quality of responses for this survey varies from year to year and from company to company.

The bottom section of Table 2-6 shows "diverted materials," which are not defined as "recycling" and so are not included in the calculation of the County's recycling rate. These diverted materials include materials burned for energy recovery and some of the recycled construction materials. Although these materials are being used beneficially, these do not meet the State's definition of recycling.

The recycled and diverted figures shown in Table 2-6 include an allocated portion of the "unknown tonnages" measured by Ecology's survey. In some cases, the data reported by

private companies for the annual recycling survey cannot be identified by source and so cannot be allocated to a specific county. Ferrous and non-ferrous metals make up the largest amount of the unallocated tonnages. These "unknown tonnages" have amounted to about 9 to 10% of

Table 2-6. Recycled and Composted Quantities by Material

Material	Annual Tons			Three-Year Average
	2014	2015	2016	
Recycled Materials				
Aluminum Cans	45	143	108	99
Appliances/White Goods	369	67	716	384
Batteries, Auto Lead Acid	325	291	258	291
Electronics	456	339	305	366
Fats, Oils and Rendering	41	151	121	104
Fluorescents and Related	20	13	12	15
Glass	383	1,702	1,324	1,136
Gypsum	33	33	11	26
Metal, Ferrous	7,508	9,029	10,219	8,918
Metal, Non-Ferrous	1,467	1,297	495	1,086
Paper, Cardboard	2,248	3,308	4,327	3,295
Paper, Newspaper	401	791	840	677
Other Recyclable Paper	832	1,820	2,128	1,593
Plastic, HDPE	37	104	78	73
Plastic, PET	73	148	139	120
Other Plastics	66	100	158	108
Steel (Tin) Cans	58	121	157	112
Textiles	61	42		34
Tires (recycled)	161	171	194	175
Used Oil	206	444	255	302
Wood	1,730			577
Yard Waste	4,691	4,174	2,541	3,802
Total Recycled	**21,209**	**24,285**	**24,385**	**23,293**
Diverted Materials				
Antifreeze	22	18	17	19
Batteries (all other)	120	132	39	97
C&D (several types)	5,893	11,806	16,568	11,423
Landclearing Debris	2,536	2,960	1,510	2,335
Oil Filters	15	9	13	12
Other Organics	519	197	542	419
Reuse (clothing, household goods)		29		10
Tires (baled, burned, reused)	50	51	64	55
Used Oil (burned for energy)	28	10	2	13
Wood (burned for energy)	14	19	652	228
Miscellaneous/Other	1	4	2	2
Total Diverted	**9,196**	**15,235**	**19,409**	**14,613**

Note: All data is from the annual recycling survey conducted by Ecology. These figures should be viewed with caution, as the data is based on a voluntary survey and the quality of responses for this survey varies from year to year and from company to company. The figures have been adjusted to remove tonnages from Naval Air Station Whidbey Island.

the recycling and diverted totals for the past three years. The generally recommended approach for dealing with the unallocated tonnages is to assign these tonnages to individual counties based on population, which is what has been done here (based on Island County's 1.1% share of the State's population).

The data in Table 2-6 can be combined with disposal data to calculate the recycling rate for Island County (see Table 2-7). Based on 24,385 tons of materials recycled in 2016 and a waste disposal amount of 46,640 tons in 2016, the recycling rate for Island County in 2016 was 34.3%. This figure is generally called a "recycling rate," although it also includes organics that are composted.

The data shown in Table 2-6 can also be used to calculate a "diversion rate," which includes the diverted materials that are not counted as recycling. In this case, other types of waste that are not defined as MSW must also be included in the calculation (see "Other Wastes Disposed" in Table 2-7). Since Island County has a significant amount of materials that are diverted from disposal but little in the way of "other wastes disposed," this calculation results in a figure, 48.1%, that is higher than the recycling rate.

Table 2-7. Recycling and Diversion Rates

Material	Annual Tons			Three-Year Average
	2014	2015	2016	
MSW:				
Recycled Materials	21,209	24,285	24,385	23,293
MSW Disposed	41,584	44,175	46,640	44,133
Waste Generation (Recycled Amount + MSW Disposed)	62,793,	68,460	71,025	67,426
Recycling Rate	**33.8%**	**35.5%**	**34.3%**	**34.5%**
All Wastes:				
Recycled Materials	21,209	24,285	24,385	23,293
Diverted Materials	9,196	15,235	19,409	14,613
All Recovered Materials	30,405	39,519	43,794	37,906
MSW Disposed	41,584	44,175	46,640	44,133
Other Wastes Disposed	627	1,009	635	757
Total Wastes Disposed	42,211	45,184	47,275	44,890
Diversion Rate	**41.9%**	**46.7%**	**48.1%**	**45.5%**
Pounds per Capita (MSW only):				
Population	80,000	80,600	82,910	81,170
Recycled, pounds/person/yr	530	603	588	574
Disposed, pounds/person/yr	1,040	1,096	1,125	1,087
Generated, pounds/person/yr	1,570	1,699	1,713	1,661

Note: All data is from annual surveys conducted by Ecology, except the population and resulting per capita figures.

There is little data available on the current levels of waste diverted by most forms of waste reduction, although a few categories of reuse are at least partially tracked. If all waste reduction activities could be measured, the County's current diversion rate would be significantly greater.

Solid Waste Composition

Data on the composition of the wastes being disposed is useful for designing solid waste handling and disposal programs. No waste composition studies have been conducted in Island County, however, as these studies are a relatively expensive endeavor. Several waste composition studies have been conducted in neighboring jurisdictions, including Naval Air Station Whidbey Island in 1998, Snohomish County in 2009, Clallam County in 2003, Thurston County in 2014, several studies for King County and the City of Seattle, and a statewide study in 2016. Unfortunately, there are some issues with the recent statewide study (including an inadequate number of samples and a lack of seasonal representation), and the other studies are relatively outdated. Lacking a clear choice for a "best fit" with Island County, Table 2-8 shows results of the three most relevant studies.

Waste composition can be expected to change in the future due to changes in consumption patterns, packaging methods, disposal habits, tourism, the economy, and other factors. These changes are very difficult to predict in the long term. Furthermore, it is hoped that implementation of this Plan will affect waste composition in Island County by changing purchasing, consumption, and disposal habits.

Future Solid Waste Quantities

In Table 2-9, waste quantities have been projected using average per capita recycling and disposal rates (see Table 2-7) multiplied by population forecasts for the County. The amounts of diverted materials (such as asphalt, concrete and landclearing debris) and non-MSW types of solid waste are not included in these figures because these materials are typically handled outside of the County solid waste system, so there will not be a need to build future system capacity to manage them.

Conclusions

Based on the projections shown in Table 2-9, the capacity of existing facilities and disposal systems is adequate to handle the needs of Island County through the planning period. Significant expansions in the recycling of specific materials may require additional or expanded facilities in the future.

2.5. EXISTING SOLID WASTE FACILITIES

The primary solid waste and recycling facility for Island County is the Coupeville Solid Waste Complex at 20018 State Route 20, Coupeville. This complex includes a transfer station for MSW, a self-haul waste receiving site, an MRW facility, a recycling center operated by Island Recycling, a yard waste drop-off site, and a septage treatment facility. A second transfer

Table 2-8. Composition of Disposed Wastes			
Type of Material	**Washington State Study, 2016**	**Snohomish County Study, 2009**	**Thurston County Study, 2014**
Recyclable Paper	7.9	11.3	9.4
Compostable Paper	5.5	4.9	3.8
Non-Recyclable Paper	1.5	2.2	2.4
Plastic Bottles	0.8	1.4	1.4
Plastic Bags and Film	5.3	5.0	5.0
Other Plastics	4.3	7.0	5.2
Metals	5.8	7.2	4.9
Food Waste	20.6	14.6	16.9
Yard Debris	5.4	2.3	3.2
Recyclable Glass	1.3	2.4	2.8
Other Glass	0.5	1.2	1.4
Disposable Diapers	3.9	2.5	2.8
Textiles	2.5	3.8	3.7
Carpet and Padding	1.2	1.8	4.5
Furniture and Mattresses	5.4	2.4	2.6
Wood Waste	13.3	13.8	9.3
Other Construction/Demo.	8.3	5.4	7.2
Animal Excrement	2.9	2.7	2.7
Other Special Wastes	2.3	1.3	0.6
Other Materials	1.3	6.8	10.3
Totals	**100.0**	**100.0**	**100.0**

Notes: All figures are percentages by weight.
Sources: 2015-2016 Washington Statewide Waste Characterization Study, 2016, data is for the Northwest waste generation area (which includes Island, San Juan, Skagit and Whatcom Counties); Snohomish County Waste Composition Study, 2009, countywide average; Thurston County Waste Composition Study, 2014, countywide average.

Table 2-9. Projected Solid Waste and Recycling Quantities for Island County				
	2020	**2025**	**2030**	**2035**
Population	84,044	87,297	89,848	92,133
At average per Capita Rates				
Recycled Amounts, 0.287 tons/person/year	24,121	25,054	25,786	26,442
Disposed Amounts, 0.544 tons/person/year	45,678	47,446	48,832	50,074
Total Waste Generated, tons/year	69,799	72,500	74,619	76,516

Source: Based on the three-year average per capita figures shown in Table 2-7 and the population figures shown in Table 2-2.

station and recycling center that serves Island County is the Camano Transfer Station, at 75 E. Hill Road, Camano Island. Two rural dropboxes in Island County provide additional opportunities for waste disposal and recycling. These include the Bayview Solid Waste Dropbox and Recycle Park, at 5790 South Kramer Road, Langley, and the North Whidbey Solid Waste Dropbox and Recycle Park, at 3155 North Oak Harbor Road, Oak Harbor. These facilities are shown in Figure 2-3.

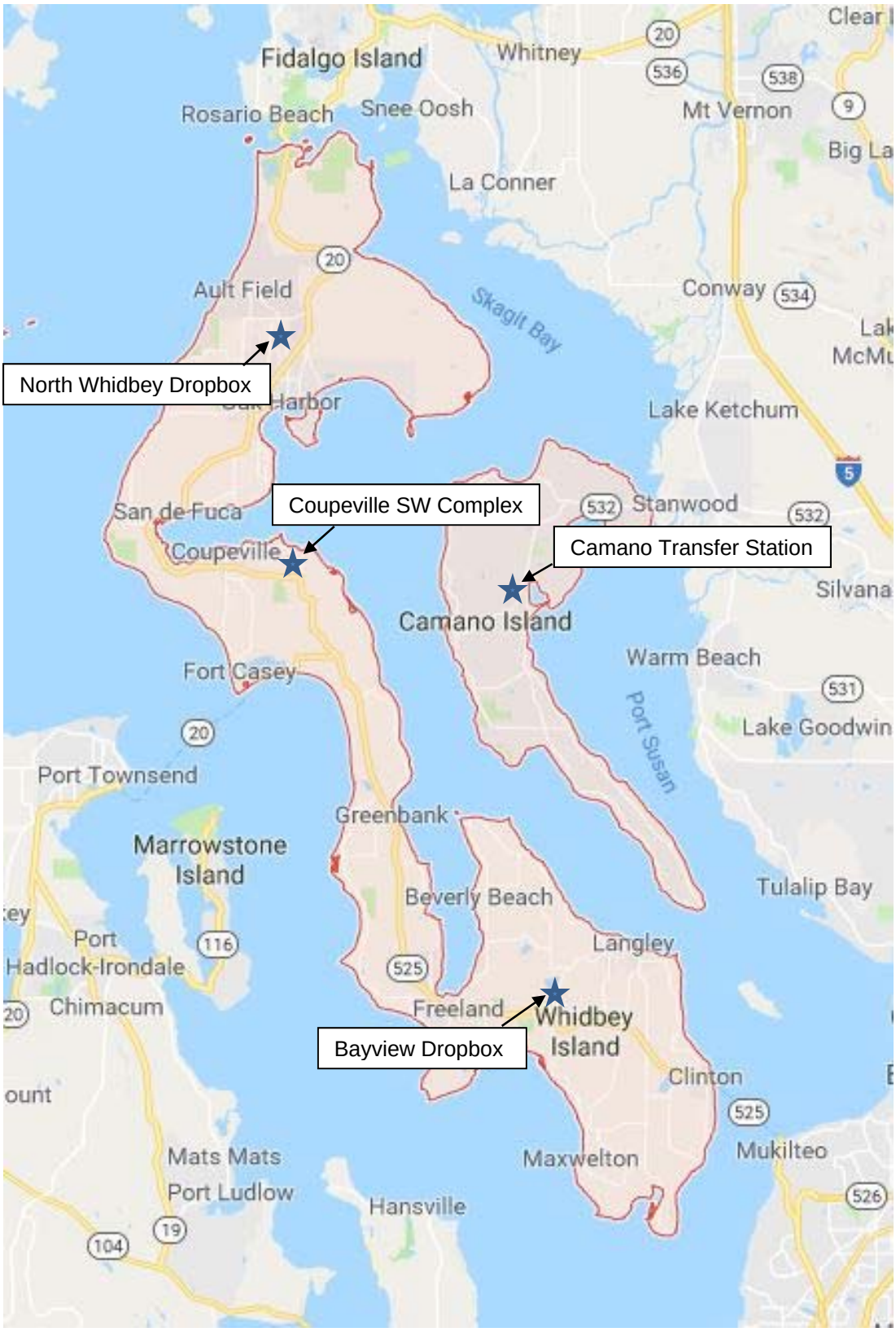
Several private operations provide important additional opportunities for recycling and yard waste composting, including the Island Recycling site in Freeland. Yard waste and related materials can be dropped off (for a fee) at Mailliard's Landing Nursery in Oak Harbor and Lenz Enterprises in Stanwood (which is in Snohomish County but also serves Camano Island).

2.6. CONCLUSIONS

The primary solid waste facilities in Island County (Coupeville Solid Waste Complex and the Camano Transfer Station) are transfer operations that consolidate and ship wastes to other sites outside of the county. As such, the capacities of these facilities are not limited to a fixed amount, but can be affected by open hours and other operational factors. In reviewing the projected solid waste tonnages anticipated to be generated in Island County over the next 20 years (see Table 2-9), these facilities appear to be adequate to handle these amounts.

As noted previously in this chapter, Island County lacks good data on the composition of the solid waste generated in the county. Performing a waste composition study or similar analysis of Island County's waste stream would be helpful, especially if programs or facilities are proposed that depend on the composition of the waste stream. A detailed local study would, however, cost a substantial amount ($100,000 to $200,000) and so is not being recommended at this time. A detailed study should be considered prior to any substantial investments in Island County that depend on the composition of the waste stream. In addition, if grants or similar funding becomes available in the future for this type of study, Island County should consider using such funds to conduct a waste composition study.

Figure 2-3
Location of Island County Solid Waste Facilities



Map data © 2018 Google

CHAPTER 3

WASTE REDUCTION

3.1. BACKGROUND FOR WASTE REDUCTION

Introduction

This chapter and the following two chapters on recycling and organics describe existing programs and future plans for activities that reduce the amount of solid waste being generated or disposed in Island County. This chapter discusses waste reduction methods that reduce the amount of waste being generated, while the next two chapters discuss methods that reduce the amounts being disposed. In other words, waste reduction methods prevent wastes from being created, while recycling and composting handle materials after those have been created as a waste. Collectively, these approaches (waste reduction, recycling and composting) are known as "waste diversion" in this plan. Waste reduction is the highest priority for solid waste management according to RCW 70.95, and is preferred over recycling and composting because the social, environmental and economic costs are typically lower for waste reduction. All three methods avoid the cost of disposing of the diverted materials as garbage, but recycling and composting require additional expenses for collection and processing. Those additional expenses are avoided in the case of waste reduction.

As used in this Plan, waste reduction includes a broad range of activities that prevent materials from becoming wastes. Specific activities that help to achieve waste reduction include reuse of household goods, repair of consumer products to extend their useful life and avoiding wasted food, to name a few examples. Backyard composting is generally included in this category because the yard debris or other materials being composted do not leave the site where those were generated. Waste reduction is also defined by State rules (RCW 70.95.030) to include methods that reduce the toxicity of wastes. To some extent, reducing the toxicity of consumer products and the resulting wastes would require changes to manufacturing processes that are generally beyond the reach of local government, although this goal can also be achieved by encouraging consumers to utilize less-toxic substitutes. Public education is, in fact, a critical step for all of the waste reduction methods.

Regulations Concerning Waste Reduction

State requirements are shown in various sections of the Revised Code of Washington (RCW) and the Washington Administrative Code (WAC). One of the more relevant provisions is the 2010 amendment to RCW 70.95.080 that states "when updating a solid waste management plan developed under this chapter, after June 10, 2010, each local comprehensive plan must, at a minimum, consider methods that will be used to address waste reduction strategies." The 2010 amendment also adopted new requirements concerning recycling and organics (see Chapters 4 and 5). Additional guidance is provided by Ecology's solid waste planning guidelines and the State Solid Waste Plan. Chapters 3, 4 and 5 of this Plan provide an update of the County's waste diversion methods and comply with State requirements regarding waste reduction and recycling opportunities and programs.

Goals for Waste Reduction

A number of the goals adopted for this Plan are applicable to waste reduction:

- Develop public-private partnerships for waste reduction and recycling programs.
- Emphasize waste reduction and recycling as fundamental management strategies.
- Assist the State to achieve its solid and hazardous waste management goals.
- Assist those who sell and use products containing hazardous ingredients to minimize risks to public health and the environment.
- Provide customers information and education to promote recommended waste management practices.

The State Solid and Hazardous Waste Plan

Another relevant source of guidance on policies and goals is the State solid and hazardous waste plan, Moving Washington Beyond Waste and Toxics. Commonly referred to as the "Beyond Waste" plan, this plan has adopted a vision that states:

> *We can transition to a society where waste is viewed as inefficient, and where most wastes and toxic substances have been eliminated. This will contribute to economic, social and environmental vitality.*

This transition is expected to take 20-30 years or more. Since 2004, this plan has been called the Beyond Waste Plan and it is updated every five years. The Beyond Waste plan has been recently updated (the "2015 Update"). The plan previously focused on actions that could be taken in five areas (industrial waste, small volume hazardous waste, organic materials, green building, and measuring progress). The updated Beyond Waste plan is divided into five sections:

Managing Hazardous Waste and Materials
Managing Solid Waste and Materials
Reducing Impacts of Materials and Products
Measuring Progress
Providing Outreach and Information

Each of these sections presents goals and actions that can be taken over the next five years. The updated plan also incorporates the concept of sustainable materials management, which has been adapted from recent work by the U.S. Environmental Protection Agency (EPA). Sustainable materials management looks at the full life cycle of materials, from the design and manufacturing phase, to the use phase, and then to the end-of-life phase when the material is either disposed or recycled. Materials management still focuses on recycling and disposal issues, but in looking at production methods and the use of materials, this approach can help identify more sustainable ways to design products that use less energy, water and toxics. This is important because the adverse environmental impacts of extraction, production and use can be far greater than those associated with disposal when the product becomes a waste. According to the EPA, a materials management approach is essential to conserving natural resources to meet both today's needs and those of future generations.

The Beyond Waste plan is referenced in later chapters of this Plan as appropriate to the topics in each chapter. Copies of the Beyond Waste plan and additional information can also be downloaded from the Ecology's web site (www.ecy.wa.gov/beyondwaste/index.html).

3.2. EXISTING WASTE REDUCTION PROGRAMS

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

Re-sellable Items and Hard-to-Recycle Materials

In addition to a number of thrift stores and consignment shops throughout Island County, the County's contract recycler also maintains re-sell operations at both the Solid Waste Complex Recycle Center and at the Island Recycling Center near Freeland. An additional re-sell operation at the Solid Waste Complex operated from June 2013 to December 2018 to divert usable or hard to recycle materials from the waste stream.

Food Recovery

Several activities and programs in Island County serve to prevent wasted food by arranging for surplus food to be delivered to people in need. For instance, a few food banks collect un-sold produce from farmers markets at the end of the day. One of the local food banks, Good Cheer Food Bank, has a program for this for the Bayview Farmers Market, accepts surplus produce from local gardeners and grocery stores, and operates two thrift stores that encourage reuse. This food bank collects surplus food from two grocery stores in Oak Harbor weekly and from two other stores in South Whidbey three times per week. The Good Cheer Food Bank also has a large on-site garden, accepts donations from local businesses and operates a gleaning program (the "Gleeful Gleaners"). The Gleeful Gleaners and other gleaning programs (including one operated by the Rotary Club of South Whidbey Island, the "Rotary Gleaners for Good Cheer") recover surplus fruit from home orchards and small farms to distribute to food banks and senior citizen centers. The Stanwood Camano Food Bank, which is located outside of Island County but serves Camano Island, also accepts food donations and operates a thrift store.

As with most forms of waste reduction, the amounts of materials diverted through such efforts are difficult to quantify but these are still excellent examples of how waste reduction efforts can provide direct and meaningful benefits to the local economy and quality of life. One piece of information that is available is that the Good Cheer Food Bank picks up an estimated 800 pounds per week of produce from the two grocery stores in Oak Harbor, which would be the equivalent of about 21 tons per year.

Adult Education Programs

The Solid Waste Division currently sponsors the WSU Extension 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 15-25 hours for public service projects, recycling at special events and education.

The volunteers have assisted with a wide variety of special projects involving composting, sustainable living practices, smart shopping, and waste generation surveys. In its 24 years of operation, the program has trained many dedicated and talented volunteers from a rich variety of backgrounds.

Student Education Programs

Education activities for students include a detailed multi-unit program for 4th and 5th grades, which covers natural resources, trash, recycling, household hazardous waste, composting, food waste, and plastic pollution. This and other classroom-based programs are tailored to the needs of each school. Additionally, site tours are also provided for kindergarten through sixth grade students. For high school and college-level students, presentations and support are provided on an as-requested basis for classes and students conducting research, writing reports, or developing school waste reduction programs.

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 minican level of service that is intended to promote waste reduction and recycling.

Backyard Composting

The Solid Waste Division, the WSU Extension Waste Wise Program and WSU Extension Island County offer technical assistance to consumers initiating backyard composting projects. Services include three compost demonstration sites and response to individual requests for information. They also conduct workshops and deliver classroom programs on vermiculture and backyard composting.

Habitat for Humanity

Reusable products and goods are collected and sold by Habitat for Humanity stores in Freeland and Oak Harbor. Habitat for Humanity handles reusable furniture, mattresses, appliances and construction materials.

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.

MRW Reuse

The MRW Facility at ICSWC operates a “reuse shed” that offers free reusable products to the public.

3.3. PLANNING ISSUES FOR WASTE REDUCTION

This section discusses management issues and service gaps associated with waste reduction.

Waste reduction is the highest priority waste management strategy because it conserves resources, reduces waste management costs, minimizes pollution and promotes conservation. Unfortunately, waste reduction can also be difficult to implement and even more difficult to measure. There are, however, several waste reduction activities that can be implemented or promoted that have concrete benefits for the local economy because these activities also help reduce costs for households and businesses.

Disposal of Consumer Products and Other Materials

A significant amount of consumer products are disposed while still useful, or could be avoided altogether by purchasing used goods or renting items that are not used much. It is not possible to quantify the amount of products and materials that could be included in this category, but one only needs to spend a short time at a disposal facility to see numerous examples of products and materials that are potentially still useful when disposed. A related concern is the disposal of still-usable materials, especially construction materials in commercial loads, and some of these of these materials are rendered non-usable after having been mixed with other garbage. A system to recover these materials directly from construction sites could be more effective in diverting clean reusable materials from the waste stream.

Priorities based on Waste Disposal Quantities

Examining data on the composition of disposed wastes can be useful for identifying opportunities to reduce waste quantities. As discussed in Chapter 2, there is no local data on waste composition for Island County but the data that is available from other areas (see Table 2-8) indicates that targeting the following materials could have significant waste reduction impact:

- Food waste, which makes up an estimated 15% to 21% of Island County's waste.
- Wood and other construction/demolition wastes, which make up an estimated 17% to 22% of Island County's waste.
- Yard debris, which makes up an estimated 2% to 5% of Island County's waste.
- Disposable diapers, which make up an estimated 3% to 4% of Island County's waste.
- Clothing (textiles), which makes up an estimated 3% to 4% of Island County's waste.

Preventing Wasted Food

Food waste is one of the largest components of the waste stream (see Table 2-8) and is estimated to be 15% to 21% of the Island County waste stream. Hence, its potential for waste reduction deserves attention. There is increasing national awareness of the amount of edible food that is going to waste. According to the USDA, a family of four could save $2,275 per year by avoiding food waste through simple changes in the way they handle food purchases and storage. According to a report by the Natural Resources Defense Council,[1] 40% of edible food is wasted as it travels from farms to kitchen tables. A recent study for Thurston County (the 2014 Thurston County Waste Composition Study) showed that almost half (about 40%) of the total food waste in the Thurston County waste stream could have been eaten but either spoiled first or was still edible when disposed. This waste has significant environmental, social, and financial

[1] From "Wasted: How America is Losing up to 40 Percent of its Food from Farm to Fork to Landfill," by Dana Gunders, staff scientist with the Natural Resources Defense Council, August 2012.

impacts. Reducing the amount of wasted food would save Island County residents and businesses a significant amount of money in wasted purchases and disposal fees. Less waste also equals less energy, water, and other resources needed to grow the food. Enhancing the food donation infrastructure and working with business to donate edible but unsellable foods could provide substantial social benefits on top of the environmental and financial benefits.

On-Site Organics Management

Organic materials (food waste and yard debris) are a substantial portion of the disposed waste stream, representing an estimated 17% to 26% of Island County's waste stream (see Table 2-8). Virtually all of this material could be handled through composting, although not all of the food waste is suitable for handling on-site due to the problems associated with composting meat and dairy products in small composting systems. Much of the organics can, however, be safely handled on-site in a number of ways. One on-site method is to leave grass clippings on the lawn rather than collecting them ("grasscycling"). The clippings provide nutrients and reduce the need for fertilizer. If done correctly, grasscycling can reduce the need for watering the lawn and may help suppress disease in turf grass.

Backyard composting is another method for handling organics on-site. Backyard composting can be used to compost yard debris, garden wastes and some types of food wastes on-site rather than sending these materials to a central composting operation or to a disposal facility. Often participants are provided with "do-it-yourself" instructions or a subsidized composting container and instructions to promote the strategy.

Some types of food waste can be handled through the use of worm bins ("vermicomposting"). This approach enables residents to turn food wastes into a nutrient-rich soil amendment.

Clothing Reuse

Despite the presence of a number of organizations addressing clothing reuse in Island County and other areas, the results of waste composition studies for other areas (see Table 2-8) show that 2.5% to 3.8% of the waste stream consists of clothing and shoes. Not all of this amount would be reusable, but virtually all of this could be either reused or recycled (converted to rags or other products).

Volume-Based Garbage Rates

Existing volume-based garbage rates are being promoted. In general, every possible opportunity should be used to promote the ability to save money on disposal fees by treating certain materials as a resource instead of a waste.

Measuring and Evaluating Waste Reduction Activities

Measuring waste reduction is difficult because the amount of waste generated in a specific area fluctuates with many variables, including economic conditions, seasonal changes and local weather. Hence, it can be difficult to demonstrate the cost-effectiveness or productivity of specific waste reduction techniques. Measurements for waste reduction are more relevant when they reflect specific products or operations.

3.4. ALTERNATIVE STRATEGIES FOR WASTE REDUCTION

Nine alternative waste reduction strategies are discussed below. The listing of an alternative in this section does not mean that it is considered feasible, nor that it is recommended (see Section 3.5 for waste reduction recommendations). In addition, the alternatives are not listed in order of priority.

Alternative A – Promoting Waste Reduction for Consumer Products

There is always more that could be done by residents and businesses to avoid creating wastes. An important method to increase waste reduction is to promote new and existing programs or methods by creating awareness of options for materials and products that could otherwise become wastes. Specific programs and activities that could be promoted for reducing the amount of consumer products (and associated packaging) that is disposed include:

- Smart shopping, such as buying in bulk or buying concentrated products, avoiding over-packaged items, purchasing durable and repairable products, and using reusable shopping bags.
- Buying or selling secondhand items.
- Borrowing or renting when possible.
- Repairing products where possible.
- Avoiding single-use or "disposable" products.
- Shared ownership of large items with a neighbor or friend.

These activities could provide benefits to personal finances as well providing benefits to the local economy (to the extent that local businesses can provide repair and rental services).

Alternative B – Encouraging Safer Substitutes for Toxic Products

As discussed earlier in this chapter, reducing the toxicity of disposed products is defined as a waste reduction method. There are several ways to accomplish this, some of which are already being done in Island County:

- Avoiding products containing hazardous ingredients (thus reducing the potential for leftover products to become wastes).
- Encouraging the use of safer substitutes for hazardous products, such as weed killer, insecticides, and cleaner, including the use of natural products.
- Encouraging consumers to use up all of a product or to only buy as much as needed.

Additional publicity could be conducted to encourage the above activities. This publicity could emphasize the environmental benefits as well as cost savings and other benefits.

Alternative C – Mandatory Separation of Yard Waste

Of all the materials in the waste stream, yard debris is possibly the easiest material to handle through other means. A ban on the disposal of yard debris and garden wastes in garbage cans would require residents to compost on-site, subscribe to a yard waste collection service, or deliver their yard waste to a facility that would compost it. On-site management could include

leaving grass clippings on the lawn, applied as a mulch in landscaping and gardens, handled through backyard composting (for leaves, grass clippings and some types of food wastes), or chipped on-site (for branches and other woody materials). If a ban is implemented, it should be accompanied by additional public education to promote these alternatives.

Alternative D – Focus on Wasted Food

A substantial amount of edible food waste is unnecessarily discarded. A public education campaign could be used to inform residents of the meaning of expiration dates, opportunities to donate food, and other steps that could be taken to reduce food waste. Much of the materials for this campaign could be provided by other programs, such as EPA's "Too Good To Waste" program.

Alternative E – Food Donations

This alternative involves identifying sources that may have significant amounts of surplus food and arranging for that food to be delivered to a food bank or other organization that can distribute it to families in need. Surplus food is often generated by grocery stores as well as institutions and large commercial establishments that provide meals, including schools, casinos, and some workplace kitchens. If surplus food from sources such as these can be properly packaged and refrigerated, and delivered to a food bank with cold storage, then the food could be distributed safely instead of being thrown out.

Alternative F – Repair Cafes

Workshops could be organized to assist people with the repair of a variety of consumer products. These workshops, or "repair cafes" can be conducted at community centers or other public buildings where participants are encouraged to bring broken items and find help fixing them. The success of this approach would depend in part on the availability of specialists who would volunteer or charge a minimal fee for their skills to help fix the items. Repairable items could include clothes, small appliances, bicycles, home decor, electronics, computers, toys and more. At the repair cafe, participants would need the help, tools and materials to make repairs.

The WSU Extension Service could possibly assist with this program, as it fits into their role of community outreach education and community events. WSU conducts these events in neighboring jurisdictions, such as in Snohomish County. The County or WSU Extension Service would need to find experts with repair skills in all kinds of fields. These cafes could be located in central areas on Camano or Whidbey Island. Snohomish County conducts four events per year at WSU Extension locations at a cost of $3,000 per event. This includes staff time, facility costs, expert fixers (at $25/hour) and equipment. This also includes publicity costs of $150 for in-house printed flyers and Facebook posts.

Alternative G – More Promotion of Volume-Based Collection Fees

Information on volume-based rates could be more easily accessible and this approach could be more widely promoted as a way to save money by recycling and reducing wastes. The success of this approach could be monitored by the number of people who sign up for lower service levels.

Alternative H – Promote More Clothing Reuse and Recycling

Educational materials could encourage people to bring reusable or recyclable clothing to charities and other collection programs. Specific educational materials could be designed for clothing, but it would probably be more cost-effective to include this topic in existing materials and websites. Clothing reuse and recycling could also be a special focus of a newspaper ad, fair booth and other educational opportunity. Additional recycling options could be explored or promoted, although this idea should be approached carefully so as not to undermine existing efforts that are collecting reusable clothing for charitable purposes.

Alternative I – Construction Material Reuse

Construction activities often generate a small percentage of materials that are still usable but that are not needed at the construction site. While the amount is small, these materials have value. Some materials are kept and used on other projects by the various companies involved in the construction process, or by the homeowner in the case of do-it-yourself remodeling projects, but a portion is thrown into disposal containers. There are better options for these materials:

- Offer materials for free or at a reduced price using an on-line service such as Craigslist.
- Place materials by the street with a free sign (although this may not be possible or easily done in all areas).
- Arrange for a collection service.

These options could be promoted through a brochure distributed at the Planning Department or even sent out with building permits.

3.5 WASTE REDUCTION RECOMMENDATIONS

The following recommendations are being made for waste reduction programs:

WR1) Continue to promote waste reduction activities such as reuse and smart shopping.
WR2) Continue to encourage safer substitutes for toxic products.
WR3) Conduct public education about how to avoid wasting food.
WR4) Conduct repair cafes.
WR5) Continue to promote clothing reuse.
WR6) Promote reuse of construction materials.
WR7) Discourage single-use plastic products.
WR8) Promote more backyard composting.

More details on the implementation of these and other recommendations are shown in Chapter 11.

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CHAPTER 4

RECYCLING

4.1. BACKGROUND FOR RECYCLING

Definition of Recycling

"Recycling" refers to the act of processing used products and packaging to convert them into a usable commodity. Recycling does not include materials burned for energy recovery or destroyed through pyrolysis and other high-temperature processes, although materials burned for energy recovery can still be considered "waste diversion." The State's definition for recycling is "transforming or remanufacturing waste materials into usable or marketable materials for use other than landfill disposal or incineration. Recycling includes processing waste materials to produce tangible commodities" (Chapter 173-350 WAC). As indicated in the definition, the common use of the term "recycling" to refer to the act of placing materials in a special cart or other container to be collected separately from garbage is incorrect in the sense that recycling does not actually occur until the materials are processed and then used to create new products. On the other hand, keeping recyclable materials separate from garbage is typically an important first step in ensuring that the materials are recycled.

Regulations Concerning Recycling

State Regulations: State requirements concerning recycling are shown in various sections of the Revised Code of Washington (RCW) and the Washington Administrative Code (WAC). Additional guidance is also provided by Ecology's solid waste planning guidelines and the State solid and hazardous waste plan, Moving Washington Beyond Waste and Toxics.

In 2010, the State Legislature amended RCW 70.95.080 to require that solid waste management plans address source separation and collection of recyclable materials, and the handling and proper preparation of materials for reuse or recycling. Solid waste management plans are also required to address "construction and demolition waste for recycling or reuse; recoverable paper products for recycling; metals, glass, and plastics for recycling; and waste reduction strategies." The Legislature's stated intent for making this amendment was "increasing available residential curbside service for solid waste, recyclable, and compostable materials provides enumerable public benefits for all of Washington. Not only will increased service provide better system-wide efficiency, but it will also result in job creation, pollution reduction, and energy conservation, all of which serve to improve the quality of life in Washington communities. It is therefore the intent of the legislature that Washington strives to significantly increase current residential recycling rates by 2020."

Island County: Island County Code 8.08B.140 addresses the conditions that allows recycling facilities to be exempt from some permitting requirements.

City of Oak Harbor: Chapter 15.04 of Oak Harbor's municipal code addresses solid waste, recycling and yard waste collection and disposal. Section 15.04.170 states that the City intends

to promote and encourage recycling, and to achieve and maintain a 50 percent recycling goal. This section also prohibits scavenging from recycling containers, identifies which materials are considered recyclable, and defines other service conditions.

Urban-Rural Designation

State planning guidelines require that counties develop clear criteria for designating areas as urban or rural for the purpose of providing solid waste and recycling services. The urban-rural designations are important because these are the basis for determining the level of service that should be provided for recycling and other solid waste programs. For example, State law (RCW 70.95.090(7)(b)(i)) requires that recyclables be collected from homes and apartments in urban areas (although exceptions to this requirement can be granted if based on viable alternatives and other criteria), whereas drop-off centers can be used in rural areas.

The Island County Comprehensive Plan will be used as the official determination of the areas designated as urban in Island County. That document addresses other factors relevant to urban service levels and is periodically updated, and it is the official document for Island County for designating urban areas. The Island County Comprehensive Plan currently designates four areas as urban: Coupeville, Freeland, Langley and Oak Harbor. Two of these areas currently have curbside recycling service (Coupeville and Oak Harbor), and an alternative plan has been approved for the other two areas (see Appendix E). This alternative plan was approved by Ecology on June 17, 2019. Camano Island also has curbside recycling service, and all other areas are provided with a rural level of service.

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 but the level of recycling service provided must continue to take into account other factors.

Goals for Recycling

Almost all of the goals for this Plan are applicable to recycling:

- Promote effective waste handling methods with respect to cost and environmental protection.
- Develop public-private partnerships for waste reduction and recycling programs.
- Emphasize waste reduction and recycling as fundamental management strategies.
- Encourage the recovery of marketable resources from solid waste.
- Assist the State to achieve its solid and hazardous waste management goals.
- Provide customers information and education to promote recommended waste management practices.

There is also a goal in the Island County Comprehensive Plan that pertains to recycling:

- Recycling of wastes and use of recycled or reused materials will be encouraged (goal NR 1.3.1.1).

The State's goal is to reach 50% recycling and composting (RCW 70.95.010(9)), and this goal was achieved in 2011 when the recycling rate rose to 50.7%. The statewide recycling rate has

decreased since that year, with the most recent data (for 2015) showing it at 45.5%.

RCW 70.95.010 does not mandate that each county adopt a 50% goal, since it is recognized that less-populated areas have greater barriers to cost-effective collection and marketing of recyclable materials. Each community is expected to set a goal that suits its situation, provided that the goal is based on justified and sound reasoning. In Island County, the current (2016) recycling rate is 34.3% (see Table 2.7) according to the State's definition of recycling and composting, and the waste diversion rate is 48.1%.

After discussion by the Island County Solid Waste Advisory Committee of the existing programs and the current challenges facing recycling programs, this Plan is adopting a waste diversion goal of 50% for Island County. In other words, the emphasis in the next few years should be placed on maintaining the current levels of waste diversion while also refining programs to respond to marketing issues. The County's progress towards meeting this goal should be monitored primarily through the annual recycling survey conducted by Ecology, supplemented with local data as available and appropriate.

4.2. EXISTING RECYCLING PROGRAMS

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

Drop-Off Services

There are five multi-material drop-off collection stations for recyclable materials in Island County. Four of these are located on Whidbey Island and one is on Camano Island. The name, location, telephone number and hours of operation for each facility are shown in Table 4-1. The drop-off stations accept a variety of materials. The materials collected at each station are summarized in Table 4-2. In addition to the multi-material drop-off collection stations, there are three drop-off stations for glass in Oak Harbor and one in the Town of Coupeville.

Table 4-1. Drop-Off Facilities in Island County

Facility	Address	Phone Number	Hours
Bayview Drop Box Station	5970 S. Kramer Road, Langley	360-321-4505	9:30 a.m. - 5:00 p.m. Mon, Wed, Sat, Sun
Camano Transfer Station	75 E Camano Hill Road, Camano Island	360-387-9696	9:30 a.m. - 5:00 p.m. every day
Island County Solid Waste Complex	20018 SR 20, Coupeville	360-678-7478	9:30 a.m. - 5:00 p.m. every day
Island Recycling	20014 SR 525, Freeland	360-331-1727	9:00 a.m. - 5:00 p.m. Tues-Sun
North Whidbey Drop Box	3155 North Oak Harbor Road, Oak Harbor	360-675-6161	9:30 a.m. - 5:00 p.m. Tues, Sat, Sun

Table 4-2. Materials Collected at Drop-Off Facilities					
Material	**Transfer and Drop Box Stations**				**Island Recycling, Freeland**
	Coupeville	**N. Whidbey**	**Bayview**	**Camano**	
Paper					
Cardboard	X	X	X	X	X
Mixed Paper	X	X	X	X	X
Newspaper	X	X	X	X	X
Shredded Paper	X	X	X		X
Plastic Bottles, 1's and 2's	X	X	X	X	X
Glass Bottles and Jars	X	X	X	X	X
Ferrous Metals					
Appliances	Fee			Fee	X (a)
Auto Bodies					X
Steel Cans	X	X	X	X	X
Wire, Ferrous	Fee			Fee	X
Other Ferrous	Fee	Fee	Fee	Fee	X
Non-Ferrous Metals					
Aluminum Cans	X	X	X	X	X
Aluminum Foil	X	X	X	X	X
Aluminum Scrap	X	X (b)	X (b)	X	X
Wire, Insulated	X	X (b)	X (b)	X	X
Other Non-Ferrous	X	X (b)	X (b)	X	X
Other					
Batteries, Cell Phones	X	X	X	X	X
Clothing	X	X	X	X	
E-Waste	X	X		X	X
Fluorescent Lights/Tubes	X	X	X	X	
Oil, Motor or Cooking	X	X	X	X	
Tires	Fee			Fee	Fee

Notes: Information is current as of September 2018. Participants should confirm current guidelines before preparing materials for recycling.
Fee = material is accepted for a fee.
(a) Non-refrigerated appliances only.
(b) Small quantities only.

Island Recycling operates the drop-off center at the Island County Solid Waste Complex (ICSWC) in Coupeville and a separate facility in Freeland. In addition to collecting recyclables at the Freeland facility, used clothing and other used goods are sold there. The recyclables collected at ICSWC are brought to the Freeland facility for baling and other processing. Additional recycling activities conducted at ICSWC include scrap metal collection bins placed at the self-haul waste disposal area, limited recovery from the tipping floor and, in past years, efforts by BaRC staff to recover reusable and recyclable materials from the waste stream.

There are numerous other drop-off opportunities in and near Island County for a wide variety of materials. A few examples include:

- Various types of construction and demolition wastes are accepted by several private companies in Island County (see Section 9.6 for more details).
- Land clearing wastes and other organics are also accepted by several facilities (see Section 9.6 and Chapter 5 for more details).
- Christians Auto Recycling accepts auto bodies, appliances, cans, tires, and other ferrous and non-ferrous metals. Fees are charged for some of these materials.
- Used oil and car batteries can be brought to several locations in and near Island County (see Chapter 8 for more details).
- Electronics (other than e-waste) can be dropped off at Office Max (Oak Harbor), Best Buy (Lynwood) and possibly other retailers that handle electronics.
- Mattresses from Island County can be dropped off at the Arlington Recycle Warehouse, a non-profit entity that accepts dry and clean used mattresses from the public for recycling at their warehouse.
- In addition to County drop-off locations, florescent lamps and bulbs can be recycled at the Ace Hardware stores in Freeland, Oak Harbor, and on Camano Island.
- StyroRecycle in Kent accepts styrofoam for recycling from Island County residents and businesses. Some packaging stores will accept styrofoam peanuts for reuse.
- Ink cartridges can be mailed back to manufacturers, brought to the MRW Facility, or dropped off at Office Max (Oak Harbor) and Best Buy (Lynwood).
- Rechargeable batteries and cell phones can be dropped off at several electronics, hardware and other stores.
- Other materials recycled in Island County by private companies, either as a special collection service or through drop-off centers in and near the County, include textiles, oils, grease, and x-ray film. Current information on these services is available at Ecology's website (the 1-800-RECYCLE website).

Curbside and Commercial Collection Programs

Curbside recycling service is offered in the City of Oak Harbor, the Town of Coupeville, and on Camano Island. The materials currently collected by these programs are summarized in Table 4-3. Glass bottles are not collected by the curbside programs in Oak Harbor and Coupeville, but drop-off containers are provided for the bottles.

The City of Oak Harbor provides weekly curbside collection of recyclable materials for all single-family through fourplex dwelling units located within its jurisdiction. The City provides service to multi-family dwellings that use carts (but not those that use dumpsters) as well as businesses on a voluntary basis. Recyclable materials collected by the City of Oak Harbor are transferred to the Island Disposal facility near ICSWC, where cardboard is separated and baled for marketing, while other commingled materials are transferred to Pioneer Recycling for processing and marketing. Cardboard is sold to Port Townsend Paper. Island Disposal also collects (for a fee) cardboard and high-grade paper directly from individual businesses in Oak Harbor and other parts of Whidbey Island. In 2017 they had 115 commercial customers for cardboard collection and 17 for mixed paper.

Table 4-3. Materials Accepted by Curbside Recycling Programs in Island County			
Material	**Oak Harbor**	**Coupeville**	**Camano Island**
Paper			
Newspaper	X	X	X
Corrugated Cardboard	X	X	X
Mixed Waste Paper	X	X	X
Shredded Paper (bagged)	X		(b)
Plastic Bottles, 1's and 2's only	X	X	X
Glass Bottles and Jars			X
Metals			
Aluminum Cans	X	X	X
Steel Cans	X	X	X
Scrap Metal	X (a)		
Other			
Motor oil and car batteries	X (a)		

Notes: Information is current as of September 2018. Participants should confirm current guidelines before preparing recyclable materials.
(a) Placed next to cart.
(b) Unbagged shredded paper is acceptable in the mixed organics carts on Camano Island.

The Town of Coupeville contracts for every-other-week collection of recyclable materials with Island Disposal. This commingled collection service includes plastic bottles, cardboard, mixed paper, aluminum cans and steel cans. Service is provided to all single-family residents and also to multi-family buildings upon request if cart placement and storage can be arranged.

Camano Island residents may subscribe with Waste Management for every-other-week collection of mixed paper, cardboard, paper food containers, plastic bottles, plastic tubs, glass bottles and jars, aluminum cans, steel cans, and clean scrap metal. Over 50% (about 52%) of the Camano Island residents who subscribe to garbage collection also subscribe to curbside recycling with Waste Management (or about 28% of the total households on Camano Island). This service is also offered to commercial customers, although none currently subscribe. The recyclables collected from Camano Island go to Waste Management's Cascade Recycling Center in Woodinville for sorting.

Island Recycling provides a pick-up service for vehicles, metals, and, for a few stores, baled cardboard.

Island Disposal provides separate collection of recyclables to large generators, such as for concrete and metals.

Public Education and Promotion

The County's education and promotion of recycling is provided by the WSU Extension Waste Wise program. The 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 Waste Wise program. Recent or ongoing recycling-related educational activities include:

- Educating residents and businesses about recycling and reuse opportunities;
- Distributing waste management information at community events;
- Maintaining two compost demonstration sites on Whidbey Island and one on Camano Island;
- Speaking to schools, businesses and community groups;
- Assisting school-related recycling projects; and
- Providing public education regarding waste-related issues.

Waste Management also gives school recycling presentations for all grades and provides technical assistance with recycling programs. The City of Oak Harbor targets school age children in some of their recycling promotions.

Monitoring Commercial Recycling Programs

Chapter 70.95 RCW requires monitoring programs for the collection of source-separated materials from non-residential sources where there is sufficient density to economically sustain a commercial collection program. Island County achieves this by working cooperatively with Ecology and utilizing the data that they collect through the annual recycling survey.

4.3. MARKET CONDITIONS AND DESIGNATION OF RECYCLABLE MATERIALS

Solid waste management plans are required to include two specific pieces of information for recycling: a market analysis and a designation of the materials considered to be recyclable. The two are inter-related because the materials that can be considered recyclable are highly dependent on which materials can be marketed for conversion into new products.

Recycling Markets

State regulations (RCW 70.95.090(7)(c)) require “a description of markets for recyclables,” hence a description of the markets for recyclable materials collected in Island County is provided below. This is intended to be only a brief report of current conditions, and it should be noted that market conditions for recyclables can undergo substantial changes in a short amount of time.

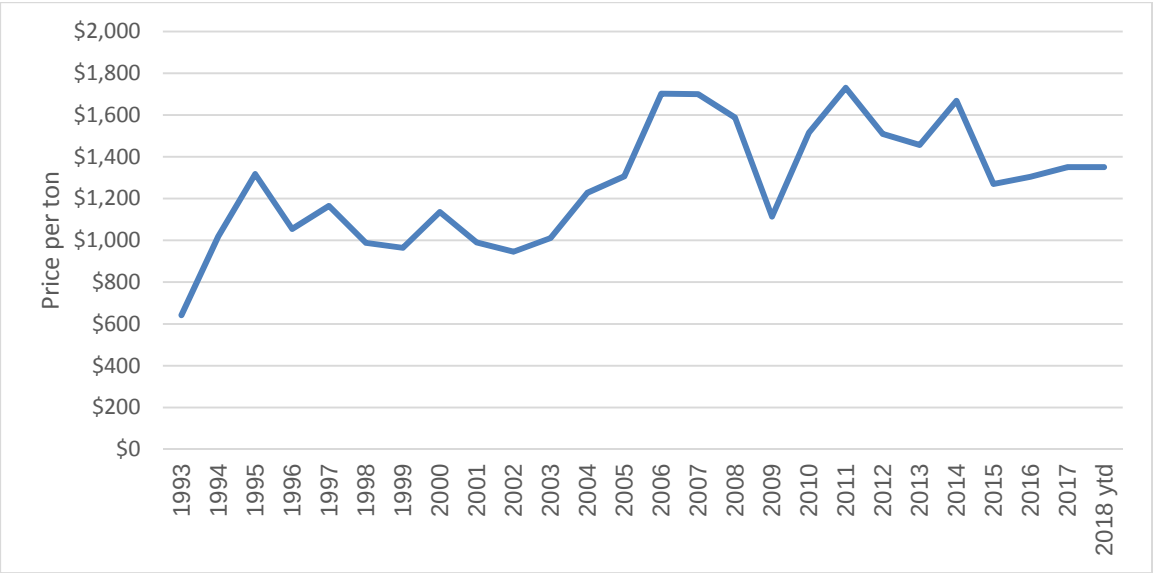
The markets for many recyclables took a serious blow in 2018 due to a decision by the Chinese government to ban the import of most types of recyclables. This decision has seriously and negatively impacted the markets for most types of plastics and paper, and to a lesser degree metals and other materials. Much of the recyclable materials collected in Washington and other parts of the West Coast were being sold to Chinese companies, so this situation has left

many in this area seeking alternative markets. This situation has also highlighted issues with the difficulties of recycling some types of materials and the high degree of contamination that is occurring in some collection systems. Both of these factors underscore the need to narrow the list of products and packaging that can be included in recycling programs, at least for the short term.

In the long term, it is anticipated that recycling markets will improve due to investments in new paper mills and other markets. It is worthwhile to note that market demand and prices for recyclables have often fluctuated significantly throughout the years, just as prices for all commodities fluctuate with demand and other factors. Some recyclable materials have seasonal cycles in supply and demand, but all materials exhibit long-term trends with the possibility of sudden price spikes or dips. Figures 4-1 and 4-2 show how the prices for aluminum cans and a few other materials collected from residential sources in the Pacific Northwest have fluctuated over the past 20 years. As can be seen in Figures 4-1 and 4-2, market prices dipped for most materials in 2008 and 2009 due to the slump in demand caused by the recession. Prices have risen or fallen at other times depending on several factors. It should also be noted that the prices shown in Figures 4-1 and 4-2 may not be representative of prices received for Island County materials, and are not adjusted for collection, processing and transportation costs.

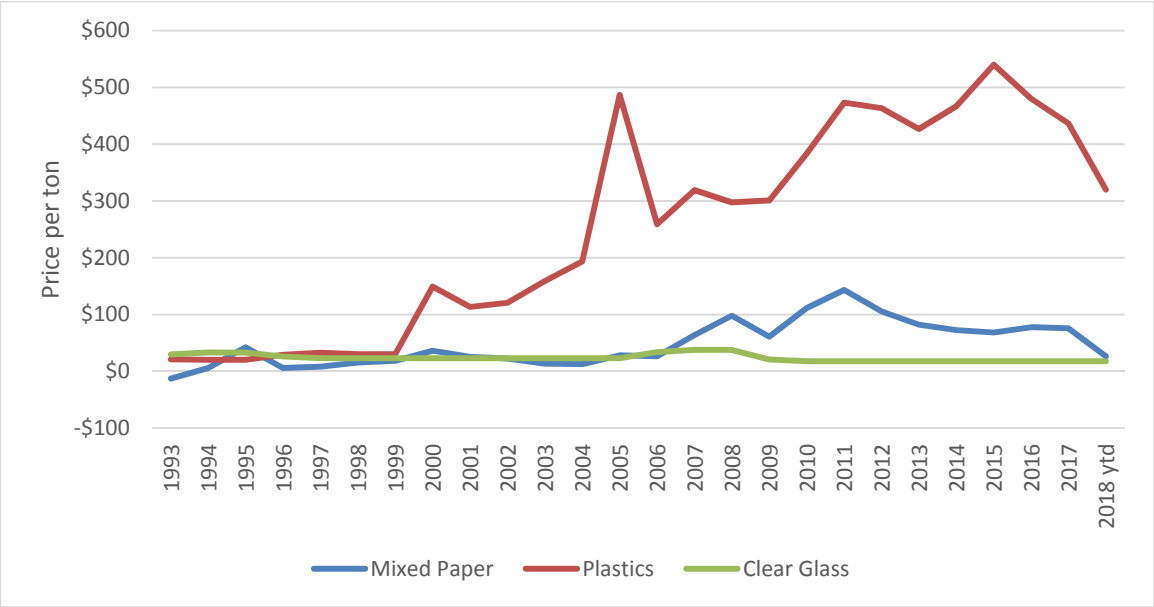
Other important factors for marketing of recyclable materials collected in Island County include transportation costs and volumes of materials. The cost of transporting recyclable materials

Figure 4-1
Price Paid for Baled Aluminum Cans (annual averages)



Notes: Prices shown may not be representative of prices received for Island County materials, and are not adjusted for collection, processing and transportation costs.
2018 ytd = year-to-date, includes data through February 2018.
Source: Seattle Public Utilities website (original data source: American Metal Markets).

Figure 4-2
Prices Paid for Select Recyclable Materials (annual averages)



Note: Prices shown may not be representative of prices received for Island County materials, and are not adjusted for collection, processing and transportation costs.
2018 ytd = year-to-date, includes data through February 2018.
Source: Seattle Public Utilities website (original data sources are Mill Trade Journal's Recycling Markets, Pulp and Paper Week, Recycling Times, and Waste News).

from Whidbey or Camano Island is higher than for other areas that are closer to the I-5 corridor or closer to processing facilities and markets in more urban areas. The low market value of many recyclable materials limits the number of materials that can be cost-effectively moved to market. The relatively low volumes collected in Island County is also a disadvantage.

Designated Recyclable Materials

The designation of recyclable materials took on more importance with the adoption of Chapter 173-350 WAC, which defines recyclable materials as being those materials "that are identified as recyclable material pursuant to a local comprehensive solid waste plan." Since market conditions for recyclables can change drastically in a short amount of time, the list of designated materials should also be accompanied by a description of the process for revising that list.

Table 4-4 shows the list of designated recyclable materials in Island County. This list is not intended to create a requirement that every recycling program in Island County collect every designated material. Instead, the intent is that through a combination of programs, residents and businesses should have at least one opportunity to recycle the designated materials. The list has been grouped to indicate the preferred degree of access that residents and businesses should have for the materials, but materials listed in Group 1 can also be collected through

Table 4-4. List of Designated Recyclable Materials	
	Material
Group 1 Materials: Materials that should be collected by curbside, multi-family and commercial recycling programs, or by the yard waste collection programs, in Island County.	Newspaper, mixed paper and cardboard Aluminum and tin cans, scrap metal, and empty/non-hazardous aerosol cans Plastic bottles and tubs, #1 and #2 only Yard debris
Group 2 Materials: Materials that should be collected at drop-off locations or through other collection services.	Glass bottles and jars Edible food (donated) Cell phones Electronics (e-waste) Mercury-containing light bulbs Clothing and textiles Oil and oil filters Antifreeze Asphalt and concrete Batteries (all types) All other metals, including appliances Reusable building materials Tires Wood
Group 3 Materials: Materials that should be recycled if markets are available.	Other plastics (bags, containers, rigid plastics) Shrink wrap, building wrap, and other film plastics Drywall Polystyrene (styrofoam) Mixed construction and demolition Food waste Food-soiled paper

Materials to be recycled should be clean and dry.

drop-off programs. It should also be noted that this list is considered the minimum set of materials to be recycled, and that it is not intended to discourage the recycling of additional types of materials if there is an opportunity or program for other materials.

The list of "designated recyclable materials" shown in Table 4-4 is based on existing conditions (collection programs and markets), and future markets and technologies may warrant changes in this list. The following conditions are grounds for additions or deletions to the list of designated materials:

- The market price for an existing material becomes so low that it is no longer feasible to collect, process and/or ship it to markets.

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

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 by the Island County Solid Waste Manager without going through a formal amendment process. Any changes in the list proposed by others should be submitted to the SWAC for their discussion. 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 also be used as indicators), then an amendment to the plan may be necessary.

4.4. PLANNING ISSUES FOR RECYCLING

This section discusses management issues associated with recycling programs.

Markets for Recyclable Materials

Clearly the largest issue facing recycling programs at this point in time is the challenges with marketing plastics and paper. Island County and local service-providers (Island Recycling, Island Disposal, Waste Management and the City of Oak Harbor) have responded to this problem by eliminating some materials from their drop-off and curbside recycling programs. It is difficult to stop people from putting out materials once they have been allowed to recycle those materials, and so this change will require a significant public outreach effort.

Markets for Wood

Island County has been without a market for wood since the closure of the Kimberly-Clark plant in Everett. This issue is discussed in greater detail in Chapter 9 (see Section 9.6).

State Requirements for Recycling Programs in Urban Areas

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 urban areas, the minimum recommended collection program includes curbside collection of source separated recyclable materials from single and multi-family residences. There are two areas in Island County that are designated as urban that do not have curbside recycling services: the City of Langley and the Freeland area. Several attempts have been made in the

past decade to implement curbside recycling in these and other areas of Whidbey Island, but none of these efforts have worked out. Previous attempts have included a proposal by Island Disposal in 2009 and a service level ordinance a few years later that was first adopted and retracted by Island County. More recently, Island County staff were in discussions with Island Disposal personnel about how curbside recycling could be implemented in additional areas, but then the recycling markets suffered a serious downturn.

Contamination Issues

Contamination reduces the market value of recovered materials and causes the entire system to be more difficult and expensive to operate. Ongoing education about what's accepted in the recycling and organics programs is needed to minimize the levels of contamination.

Glass in Commingled Mix

Glass is currently included in the curbside recycling program on Camano Island and is mixed with other materials. When mixed with other materials, glass both contaminates the other materials and the glass itself is difficult to recycle.

Uniformity of Acceptable Recyclables

In addition to glass, other materials accepted for recycling from residential households are not the same countywide. The materials accepted by Waste Management on Camano Island include some materials that are not collected elsewhere in the county. These differences create some confusion and make it more difficult and less efficient to educate the public.

Collection Frequency

The collection frequency for the residential curbside recycling programs is currently every-other-week in Coupeville and on Camano Island. Various studies have shown that more frequent collections leads to more diversion, although the recent rate study for Island County concluded that every-other-week collection was more cost-effective.

Changes in the Composition of Recyclables

Several trends are occurring that are making recycling somewhat more challenging and potentially less profitable. One such trend is the decreasing amounts of newspapers and magazines that are being produced, whereas these materials used to make an important contribution to the profitability of recycling systems. According to the American Forestry & Paper Association, the amount of newspaper recycled in the U.S. has been cut in half in the past 20 years (from 15.8 million tons to 7.9 million tons) despite an increase in the recovery rate during the same period (from 50% to 69%). At the same time, some of the non-paper materials have gotten lighter. The average weight of an aluminum beer can has decreased by 38% since 1972 according to the Aluminum Association, while the Beverage Marketing Corporation reports that the weight of a half-liter plastic water bottle has declined by 52% since 2000. The net result of all these changes is a lighter curbside recycling mix. This is beneficial for waste reduction purposes but can lower recycling revenues and make it more difficult to achieve recycling goals.

Further complicating this issue is the increasing use of plastic pouches and other flexible packaging. These materials are also generally good for waste reduction but are not acceptable in the curbside recycling mix and so reduce the amount of recyclables generated in a household and also become a contaminant if they are placed in curbside carts. New combinations of materials, such as packaging constructed with paper and plastic layers, also create issues for recycling.

4.5. ALTERNATIVE STRATEGIES FOR RECYCLING

The following alternatives were considered for recycling programs in Island County. The listing of an alternative in this section does not mean that it is considered feasible, nor that it is recommended (see Section 4.6 for recycling recommendations). In addition, the alternatives are not listed in order of priority. See also Chapter 9 for alternatives addressing construction and demolition wastes and Chapter 10 for public education alternatives.

Alternative A – Increase Curbside Recycling Services

Alternative A considers the establishment of additional curbside recycling programs. New curbside programs in Langley and the Freeland area would satisfy the State's guidelines for urban areas to have this level of service. Curbside recycling services could also be expanded county-wide. In Freeland and other unincorporated areas, this service could either be offered as an optional service or could be required to be combined with garbage service. The latter would require a service level ordinance, which would be a challenging endeavor. As an optional service, however, only about 5 to 15% of the customers would likely sign up for it (per the recent Solid Waste and Septage Study for the Island County Solid Waste Program, by Skumatz Economic Research Associates. So this approach would be relatively costly and ineffective in diverting additional materials.

The clear downside to this alternative is the current problems with markets for recyclable materials, especially paper and plastics. This would be a difficult time to begin new recycling programs given the problems with marketing the amounts of recyclable materials currently collected.

Alternative B – Increase Commercial Recycling Services

This alternative addresses the possibilities for increasing recycling by businesses, institutions and other non-residential entities. Currently (in 2017), the number of commercial recycling accounts in Island County is less than 10% of the number of commercial garbage accounts. Additional businesses and institutions are likely recycling through the use of drop-off sites and other opportunities, but it appears that there is room for growth in this sector.

Additional recycling could be encouraged through voluntary methods, including more outreach and technical assistance to businesses, although it could be argued that this is the method that has been used to date with only limited success. Mandatory requirements could also be considered. This could take a number of different approaches, including requirements to recycle specific materials (such as cardboard), to recycle the primary materials generated by the

business, a requirement for all businesses to subscribe to commingled recycling, or other approaches. Businesses often generate significant amounts of relatively clean recyclables, but resist recycling programs for a variety of reasons. Requiring all business to recycle would create a "level playing field" that would not create a competitive advantage or disadvantage. On the other hand, such requirements would not be well received by the businesses and would be politically difficult to implement.

As with residential recycling, one of the major barriers to increasing commercial recycling at this point in time is the poor markets for recyclables.

Alternative C – Address Contamination Issues

A large part of the current marketing issues for recycling has to do with contamination by non-recyclable materials. This has been an increasing problem over the past decade due to a variety of factors (the use of single-stream carts, the push to recycle more, confusing claims made by manufacturers, etc.). Many curbside collection programs currently have contamination rates of 20% and higher. The processing facilities for recyclable materials are unable to remove all of these contaminants, and in fact cannot even separate acceptable recyclables from each other once they have been mixed. The materials shipped to markets from these facilities include contaminants and are also cross-contaminated with other recyclables (such as plastic bottles in paper bales).

Reducing the amount of contamination in the curbside materials is not an easy task but there are actions that could be taken. The recycling service-providers (the City of Oak Harbor, Island Disposal and Waste Management) are probably in the best position to conduct these activities. Possible steps that can be taken to address contamination include:

- Additional public outreach; while helpful, this is likely the least effective approach. Sending out public education materials on this topic has a tendency to be viewed only by the people that are already interested in recycling and hence are already trying to recycle correctly.
- Not picking up carts with high levels of contamination; this would be more effective, as some areas have higher contamination rates due to specific households that either do not know or do not care about recycling properly. Not picking up these carts sends a signal that this behavior will no longer be tolerated.
- Cart tagging: attaching tags to the carts in a specific area to note the unacceptable materials present is an expensive approach but has proven effective in the areas where it has been conducted. This approach helps to educate participants about specific items that cannot be recycled.

Alternative D – Continue to Adjust Recycling Programs for Market Conditions

Steps have already been taken to eliminate specific materials from recycling programs that cannot easily be recycled. This alternative recognizes that additional steps may need to be taken along these lines. It should be noted that an extensive public outreach will be needed to effectively implement any such changes.

Alternative E – Support for Market Development

New or expanded markets for products made from recycled materials would help recycling programs by increasing the value of the materials collected. Creating or encouraging the development of such markets are generally beyond the reach of local governments due to the substantial financial investments required, although if a private proposal was made then the County could consider providing their support for it. More likely, market development efforts would occur on a state or national level, and Island County could consider providing their support for those efforts if appropriate. These efforts might include mandates for recycled content in specific products or requirements for state and local agencies to use recycled materials where applicable.

4.6 RECYCLING RECOMMENDATIONS

The following recommendations are being made for recycling programs:

R1) All urban areas of Island County should receive curbside recycling service. Curbside recycling services should be implemented in Langley and Freeland when recycling markets improve.
R2) Consider expanding curbside recycling programs to additional rural areas at a later date when market conditions improve.
R3) Continue to make changes in recycling programs based on marketability.
R4) Contamination in recycling programs should be addressed through additional public education that targets specific materials and participants.
R5) Local agencies should use products with recycled content when possible.

More details on the implementation of these and other recommendations are shown in Chapter 11.

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CHAPTER 5

ORGANICS

5.1. BACKGROUND FOR ORGANICS

Definitions for Organic Materials

In this Island County Solid and Moderate Risk Waste Management Plan (this Plan), the term "organics" is intended to include compostable materials such as yard debris and food waste. Other compostable materials, such as compostable paper and plastics, may also be included depending on the collection program and acceptance policies for processing facilities. Some programs in Island County collect a mixture of yard debris, food waste and food-soiled paper, and this is referred to as "mixed organics" in this Plan.

Yard debris is defined to include materials such as lawn clippings, leaves, weeds, vegetable garden debris, branches and brush. Because branches and brush are included in the definition of yard debris, programs discussed in this chapter and figures for "composting" include chipping and other processing of brush, Christmas trees and similar materials. Backyard composting means a small-scale activity performed by homeowners or others on their own property, using yard debris that they have generated on that property. Some types of food waste, primarily fruit and vegetable scraps, can be managed through backyard composting or by using worm bins ("vermicomposting"). By definition, backyard composting and vermicomposting are considered to be a form of waste reduction and so are addressed in Chapter 3 of this Plan.

Food waste can be defined in several ways. For the purposes of this Plan, food waste is generally intended to include those materials acceptable in the curbside collection program on Camano Island, which are all types of food waste (including dairy and meat products), food-soiled paper (such as paper towels and pizza boxes), shredded paper, and some other types of compostable paper. The definition of food waste is not intended to include fats and oils, liquids in general, or other organics such as wood, pet waste, diapers and compostable plastics.

Composting can be defined as the controlled biological decomposition of organic materials to produce a beneficial product (compost). Compost has several applications, but as a soil amendment it provides organic matter and nutrients, loosens soils, and helps retain moisture.

Regulations Concerning Organics

Local and regional regulations concerning open burning of land clearing debris is discussed in Chapter 9 (see Section 9.6).

State Regulations: In 2010, the State Legislature amended RCW 70.95.080 to require that solid waste management plans address source separation and collection of organic materials. Plans updated after June 10, 2010 are required to address "organic material including yard debris, food waste, and food contaminated paper products for composting or anaerobic digestion." Solid waste plans are also required to "consider and plan for … source separation of … organic

materials" and "handling and proper preparation of organic materials for composting or anaerobic digestion."

State law (RCW 70.95.090 (7)(b)(iii)) also requires that solid waste management plans include a waste reduction and recycling element that addresses yard waste collection programs where "there are adequate markets or capacity for composted yard waste within or near the service area to consume the majority of the materials collected." The law implies when cost-effective, source-separated yard waste should be processed into compost. The type of program(s) needed to satisfy this provision is not clearly stated, and it is generally assumed that a mixture of drop-off and curbside programs (such as Island County currently has) is adequate for meeting this provision.

Island County: Island County Code 8.08B.150 addresses the conditions that allow composting operations to be exempt from some permitting requirements.

City of Oak Harbor: Chapter 15.04 of Oak Harbor's Municipal Code addresses solid waste, recycling and yard waste collection and disposal. Section 15.04.180 describes the voluntary yard waste program.

City of Langley: Chapter 13.40 of Langley's Municipal Code addresses the conditions for acceptance of organic materials at the city's composting facility and the sale of finished compost.

Goals for Organics

Planning Goals: Almost all of the goals for this Plan are applicable to organics:

- Promote effective waste handling methods with respect to cost and environmental protection.
- Develop public-private partnerships for waste reduction and recycling programs.
- Emphasize waste reduction and recycling as fundamental management strategies.
- Encourage the recovery of marketable resources from solid waste.
- Assist the State to achieve its solid and hazardous waste management goals.
- Provide customers information and education to promote recommended waste management practices.

There is also a goal in the Island County Comprehensive Plan that pertains to organics:

- Promote non-polluting alternatives to wood burning, such as solar heating and chipping instead of burning slash (goal NR 2.2).

Organic materials collected for composting are intended to count towards Island County's recycling goal of 50% (see Section 4.1).

State Solid and Hazardous Waste Plan: The Washington State Solid and Hazardous Waste Plan, "Moving Washington Beyond Waste and Toxics," has adopted a vision that society can

transition to a point where waste is viewed as inefficient and most wastes have been eliminated. This transition is expected to take 20 to 30 years or more. In the short term, the 2015 update to the State plan establishes several goals for better managing and increasing the diversion of organic materials. These include goals to reduce wasted food; to increase the use of compost and other soil amendments from recycled organics to reduce water consumption and the need for fertilizers, pesticides and herbicides; and to diversify the state's organics processing infrastructure and the end-use markets for recycled organic products.

Waste Management Hierarchy: The programs in Island County are intended to be based on a hierarchy of management methods for organics. Washington State law (RCW 70.95.010 (8)) provides direction on the preferred management methods for yard debris (and for recycling and other solid wastes in general). In addition, recent work by the U.S. EPA provides a hierarchy specifically for food waste. The hierarchy for food waste differs somewhat from other organics because a portion of the food waste can be recovered to feed people and animals. Otherwise, both are similar in that each begins with waste prevention as the most desirable management method and ends with landfilling as the least preferred option. Table 5-1 shows specific options for managing yard waste and other organics and options for food waste, in order of preference from waste prevention to disposal methods.

Table 5-1. Hierarchy of Preferred Management Methods

Management Method (in order of highest to lowest preference)[1]	Yard Debris, Wood, Compostable Paper, Other Compostables	Food Waste[2]
Waste Prevention	Product Substitution[3] On-Site Composting GrassCycling	Source Reduction Feed Hungry People Feed Animals
Composting and Recycling	Collection and Processing into Mulch (for wood waste) Collection and Processing into Compost	Collection and Processing into Compost and Other Products Rendering
Energy Recovery	Anaerobic Digestion Fuel (wood waste)	Anaerobic Digestion Biodiesel (grease)
Landfilling and Incineration without Energy Recovery	Disposal (waste export)	Disposal (waste export)

Notes:
1. The management methods shown in the first column are based on Washington State law (RCW 70.95.010 (8)).
2. The hierarchy shown above for food waste is based on EPA''s "Food Recovery Hierarchy," but with energy recovery methods downgraded below composting.
3. Product substitution in this case includes the use of durable products (ceramic plates, cloth napkins, etc.) in place of disposable products (such as paper plates and napkins).

This chapter primarily addresses the second method shown in Table 5-1, the collection and processing of organics into compost and for other purposes. Waste prevention methods are addressed in Chapter 3 and landfilling is addressed in Chapter 7.

5.2. EXISTING ORGANICS PROGRAMS

Existing options for organics include on-site management, drop-off sites, and residential curbside collection in Oak Harbor and on Camano Island. These options are discussed below.

On-Site Management of Organics

Yard debris and some types of food waste can be handled on-site through backyard composting and worm bins. These activities are defined as a form of waste reduction and so are discussed in greater detail in Chapter 3 of this Plan.

Land clearing debris is sometimes burned where it is generated or handled through on-site grinding and land application. Several local companies operate mobile grinders for on-site grinding. Open burning of land clearing debris is allowed outside of the designated urban growth areas, subject to a permit from Public Health and other conditions. See Section 9.6 of this Plan for more details on land-clearing debris.

Wildwood Farm, located on Whidbey Island, is an 80-acre horse farm that boards and trains horses and provides riding classes. They compost their own organic materials (primarily horse manure and bedding materials) on site.

Drop-Off Sites

Yard waste is accepted at the Island County Solid Waste Complex (ICSWC). In the past, this was ground into a mulch product that was available to the public either at the ICSWC or from the grinding company. In the future, the yard waste will be taken to a permitted composting facility. Yard waste is also accepted at the Camano Transfer Station and is then hauled to a nearby composting facility, Lenz Enterprises, in Stanwood.

The City of Langley operates a drop-off yard debris collection site at its wastewater treatment plant. This facility accepts grass clippings, leaves, brush and other yard waste, but requests that customers keep woody and easily-compostable materials separate from each other. Charges for the yard waste are based on number and size of the loads, and charges are slightly less for city residents versus non-residents and commercial customers. The yard waste is mixed with sewage solids (three parts yard waste to one part sewage solids), composted and then the resulting Class A biosolids is given away. Fees are charged for large loads or if assistance is provided to load vehicles.

Mailliard's Landing Nursery accepts yard waste and composts it at their location in Oak Harbor. The nursery also accepts soil and clean dirt. Mailliard's uses this material to produce compost, mulch, garden mix, and lawn soil which is then sold.

Land clearing debris is not accepted at Island County solid waste facilities but can be recycled at various locations in Island County. Vegetation can be taken to Mailliard's Landing Nursery (Oak Harbor) and Lenz Enterprises (in Stanwood but serving Camano Island).

Curbside Collection Programs

The City of Oak Harbor provides curbside collection service for yard waste. The yard waste collection service is provided weekly from March 1 through November 30 and monthly from December 1 to February 28. Residents who sign up for the program are provided with a 95-gallon cart. Instead of using a cart, residents can purchase 30-gallon paper bags for pre-paid service at two local stores and at city hall. The collected yard waste is transported to Mailliard's Landing Nursery for composting and marketing.

Waste Management collects mixed organics on Camano Island. This approach allows participants to include food waste and compostable paper in their yard waste. The allowable materials include yard waste (such as grass clippings, leaves, garden vegetable and fruit waste, pumpkins and Christmas trees), food-soiled paper (including coffee grounds and filters, tea bags, waxed cardboard, paper towels and napkins, non-coated paper plates, approved compostable containers, and unbagged shredded paper), and food waste (all types except grease and liquids). About 17.3% of the households on Camano Island currently subscribe to this service (or 31.5% of the residential garbage customers). There are currently no commercial customers in this area. The yard waste is delivered to Lenz Enterprises. Lenz produces topsoil, mulch, and compost from these materials. They bag much of their compost for retail sales.

Other Collection Programs

Other types of organics are collected through specific programs:

- Collection of fats, oils and other materials for rendering and biodiesel production is conducted by private companies.
- Recovery of edible food is conducted by food banks and others (see Chapter 3 for more details).

Public Education for Organics Programs

Public education activities for organics are included in the general activities discussed in Chapters 3 and 10 (see Sections 3.2 and 10.2), as well as the more specific activities discussed in Chapter 4 (see Section 4.2).

Processing and Market Capacity

Most of the organics collected in Island County are processed by Mailliard's Landing Nursery and Lenz Enterprises. These two processors report that the markets for their finished products have been steady over the past five years. The processers expect the markets to improve as there is a push to increase the utilization of compost in public projects, stormwater programs and landscaping projects. Processing capacity in Island County and Stanwood is sufficient to handle the organics currently being collected. Mailliard's has been expanding every year over the past ten years and could take more material on a gradual basis. Lenz also receives organic

materials from Snohomish County, Seattle and several other cities. They feel that their ability to increase capacity is based on existing contracts, permit use extension and market uses.

5.3. PLANNING ISSUES FOR ORGANICS

This section discusses management issues associated with organics.

Access to Organics Diversion Options

Access to yard waste diversion options (drop-off and curbside collection) is inconsistent throughout Island County. Some areas have access to curbside collection (Oak Harbor and Camano Island) and most of the County residents and businesses have access to public or private drop-off sites in Coupeville, Camano Island, Freeland, Langley, and Oak Harbor.

Plastics Contamination in the Organics

Local processors report that the organics collected from Island County are cleaner than material from other areas, but that plastics contamination is still a large issue. This contamination, which includes materials such as plastic bags, rigid plastic pieces and plastic water bottles, presents the greatest challenge for the processors. Curbside collection programs are especially prone to confusion as to what is compostable and these materials must go through a higher degree of processing to clean up. At Mailliard's Landing, this means setting aside the loads of yard waste and manually removing contaminants. At Lenz Enterprises, more contamination requires them to slow down the sorting lines resulting in increased mechanical and labor expenses. When food waste is collected with yard waste, items such as "biodegradable" bags and utensils are found that are not always compostable.

Public Education for Organics

In addition to plastics, the public education materials for the organics collection programs do not consistently address the contaminants identified by the processors. Increased communication with the processors and refinement of public education materials by the service-providers is necessary to decrease contamination levels.

Carbon to Nitrogen Ratio in Curbside Materials

The ideal carbon to nitrogen ratio for composting is generally 25 to 30 parts carbon to one part nitrogen. Higher amounts of carbon leads to a slower decomposition process, while higher amounts of nitrogen can create serious odor problems. The organic materials collected through curbside programs is relatively high in carbon, hence the processors are generally seeking ways to add more nitrogen to the system.

Apple Maggot Quarantine Issues

Concerns have been raised recently by the Washington State Department of Agriculture (WSDA) about transporting mixed organics and garbage to eastern Washington and the potential for these practices to introduce apple maggots from quarantine areas to apple-growing areas. Restrictions have been placed on practices that generally prevent the shipping

of the mixed organics into a non-quarantine area. Fortunately, this is not an issue for Island County, but could be a factor to consider in the future if additional processors are needed.

Hog Fuel Markets and Wood Diversion Potential

Woody materials that are ground to a smaller size and used as a fuel, generally at paper mills or other large industrial facilities, are referred to as "hog fuel." Hog fuel has been the primary market for wood waste from construction, demolition and land clearing wastes, but the market for hog fuel is currently weak and suppliers are paying increasing fees to ship this material to existing markets. There is a concern that the current users of hog fuel will eventually switch to natural gas or other sources of fuel, causing further setbacks to an already weak market. While the use of wood waste for hog fuel is not defined as recycling, it still represents a form of waste diversion and is a more beneficial use than simply landfilling the wood waste.

New Opportunities for On-Site Diversion

Large generators of discarded food (including grocery stores, restaurants and commercial kitchens) can potentially manage this waste (with pre-approval from the Health Department) through on-site systems such as small-scale anaerobic digestion, on-site composting and other methods. Small-scale anaerobic digestion is currently still under development and may be too technically challenging for most businesses, and on-site composting methods are generally not cost-effective where collection services provide a less labor-intensive approach. These methods may show greater promise in the future, however, and could be monitored for their potential.

5.4. ALTERNATIVE STRATEGIES FOR ORGANICS

The following alternatives were considered for organics programs in Island County. The listing of an alternative in this section does not mean that it is considered feasible, nor that it is recommended (see Section 5.5 for organics recommendations). In addition, the alternatives are not listed in order of priority. See also Chapter 3 for alternatives addressing waste reduction of organics.

Alternative A – Increased Curbside Collection of Yard Waste

Alternative A considers the implementation of additional organics collection programs in Island County. The areas not currently served by curbside collection of organics consist of most of Whidbey Island (all areas outside of the City of Oak Harbor). If additional curbside collection programs were instituted in these areas, these should be phased in to avoid overwhelming the processing facilities.

Alternative B – Compost Site at ICSWC

Alternative B considers the establishment of a compost site at the County's main transfer station (ICSWC). There may be space for this operation to the north or south of the existing yard waste receiving area. The cost to install and operate this type of facility would be significant, including site preparation (grading to create a level or slightly-sloped composting

pad, installation of water and electricity); installation of an impervious surface, aeration capabilities and a run-off containment pond; equipment such as a compost turner and other heavy equipment; staffing; and engineering and permits. The site could be operated by Island County or by a private company through a contract.

A compost site at ICSWC could also incorporate biosolids into the composting mixture. This concept is discussed in Chapter 9 (see Section 9.4).

Alternative C – More Promotion of the Mixed Organics Collection Program on Camano Island

More promotion could be conducted for the mixed organics to encourage residents and businesses to sign up for this service and to inform them of the materials that are acceptable for it. Although the current subscription rate is not too bad (slightly less than one-third of the garbage subscribers also subscribe to the organics collection service), there is room for improvement. Most households generate yard waste and virtually all generate food waste, so potentially all households could benefit from this service. Facility capacity should be confirmed before embarking on programs that could substantially increase the amounts of organics being collected.

Alternative D – Reduce Contamination in Curbside-Collected Organics

This alternative is similar to Alternative C in Chapter 4 (Recycling). As with recycling, reducing the amount of contamination in the curbside organics would not be an easy task but there are actions that could be taken, and the recycling service-providers (the City of Oak Harbor, Island Disposal and Waste Management) are probably in the best position to conduct these activities. Possible steps that can be taken to address contamination include:

- Additional public outreach; while helpful, this is likely the least effective approach. Sending out public education materials on this topic tends to be viewed only by the people that are already interested in this and hence are already trying to participate correctly.
- Increased communication between the processors and those sending out public education materials; the processors have a clear picture of the type and quantity of contaminants. When the public education is designed to address these specifics, behavior change is more likely.
- Not emptying carts with high levels of contamination; this would be more effective, as some areas have higher contamination rates due to specific households that either do not know or do not care about properly setting out clean yard and food waste. Not picking up these carts sends a signal that this behavior will no longer be tolerated.
- Cart tagging: tagging the organics carts in a specific area to note if there are unacceptable materials present (or noting that the household is doing a good job of setting out the right materials) is an expensive approach but has proven effective in the areas where it has been conducted. This approach helps to educate participants about specific items that cannot be composted.

Alternative E – Encourage Markets for Compost

Island County and the cities/town could take steps to encourage markets for locally-produced compost by encouraging the use of compost by all departments in public projects. Planning departments could be encouraged to recommend compost in landscaping and erosion control projects, using brochures and other information developed by Island County. Private companies could also be encouraged to use compost through public outreach and building specifications. These activities would be more important if additional amounts of organics will be diverted through increased curbside collections or other programs.

5.5. RECOMMENDATIONS FOR ORGANICS

The following recommendations are being made for organics programs (see also Chapter 3 and Chapter 9, Section 9.4):

O1) Investigate the possibility of composting food waste or mixed organics at ICSWC in the future.

O2) Promote the mixed organics collection program on Camano Island.

O3) Conduct more public education for yard waste and mixed organics collection programs to reduce contamination.

O4) Encourage markets for compost where possible.

More details on the implementation of these and other recommendations are shown in Chapter 11.

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CHAPTER 6

SOLID WASTE COLLECTION

6.1. BACKGROUND FOR WASTE COLLECTION

Introduction

This chapter addresses the solid waste collection system in Island County. The collection system currently consists primarily of three entities; a municipal collection system (Oak Harbor) and two private collection companies (Waste Connections and Waste Management). A fourth waste collection system operates on Naval Air Station Whidbey Island (NASWI), but NASWI is not in the planning area for this Plan.

State Regulations Concerning Waste Collection

The Washington State authorities that govern collection activities are Ecology and the Washington Utilities and Transportation Commission ("UTC"). RCW 70.95.020 also assigns responsibilities to local government for the management of solid waste handling while encouraging the use of private industry. The various laws that may apply to solid waste collection companies include:

- **Chapter 81.77 RCW, Solid Waste Collection Companies**: This law establishes the state regulatory authority for solid waste collection companies and the procedures and standards with which they must comply.
- **Chapter 35.21 RCW, Cities and Towns**: This law establishes authority of towns and cities in regard to solid waste and the procedures and standards with which they must comply. Per RCW 35.21.120, "A city or town may by ordinance provide for the establishment of a system or systems of solid waste handling for the entire city or town or for portions thereof. A city or town may provide for solid waste handling by or under the direction of officials and employees of the city or town or may award contracts for any service related to solid waste handling."
- **Chapter 36.58 RCW, Solid Waste Disposal, and 36.58A RCW, Solid Waste Collection Districts**: Chapter 36.58A RCW authorizes counties to form a collection district that would enable the adoption of mandatory waste collection. Chapter 36.58 RCW primarily addresses disposal activities, including the ability to form a solid waste disposal district, but one section (RCW 36.58.045) authorizes counties to "impose a fee upon … a solid waste collection company" to fund compliance with a solid waste management plan.
- **Chapter 480-70 WAC, Rules for Solid Waste and/or Refuse Collection Companies**: This chapter establishes standards for public safety, fair practices, reasonable charges, nondiscriminatory application of rates, adequate and dependable service, consumer protection, and compliance for solid waste collection companies.

The Washington Utilities and Transportation Commission

In 1961, State law established exclusive territories for solid waste collection in order to ensure that everyone has access to garbage collection service and to limit the number of garbage trucks operating in each area. Solid waste collection companies must be issued a "certificate" that allows them to collect specific types of waste in specific areas. The UTC is responsible for issuing these certificates and further supervises and regulates waste collection companies by:

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

The UTC also regulates energy companies (electrical and natural gas utilities), private water companies, telecommunications, and other transportation companies (such as commercial ferries, pipelines, and railroads). More information can be found at UTC's website (www.utc.wa.gov/).

Waste Collection Options for Cities

Four forms of collection services are allowed by State law in the cities and towns:

- **Municipal**: This approach utilizes municipal employees and equipment to collect waste. The City of Oak Harbor uses this approach.
- **Contracted**: Incorporated cities and towns may elect to contract with private companies for waste and recycling collection. Services provided by the contractor and regulated by the jurisdiction need to comply with Chapter 70.95 RCW (Washington State Solid Waste Management program). The Town of Coupeville uses this approach through a contract with Island Disposal (a Waste Connections company) for waste collection services.
- **Certificated**: With this collection method, cities are not actively involved in garbage collection. Instead, it allows the UTC-certificated hauler to provide service under UTC regulation (and at rates approved by the UTC). The City of Langley uses this approach by allowing Island Disposal to collect residential and commercial solid waste as part of their certificated services in the unincorporated areas of Whidbey Island.
- **Licensed collection**: This method applies to municipalities that require private collectors to have both a city-issued license as well as a UTC certificate. This approach gives the municipality limited control over collection services, and allows cities to require that important services be provided. For instance, some cities in the past have used this method to require collection companies to pick up Christmas trees, provide a semiannual residential cleanup, or provide free service to public buildings and facilities.

Local Regulations Concerning Waste Collection

Island County: Island County's municipal code, Chapter 13.02, addresses the Solid Waste Management System. The purpose of Section 13.02A.010 is to establish a comprehensive county-wide program for solid waste handling and solid waste recovery and/or reclamation. This requires effective control of the disposal of all non-exempt solid waste generated and collected within the unincorporated areas of Island County at a site or sites consistent with its comprehensive plan. Island County code states that the County desires to exercise its right to provide facilities to control the disposal of all solid waste generated and collected within the unincorporated areas of its borders and to permit the incorporated municipalities of the county to use its facilities. In 2012, Island County's Chapter 13.04 set minimum service levels for residential collection and then this was repealed it in 2013.

Town of Coupeville: Chapter 8.12 requires residents and businesses to have garbage collection and sets minimum standards for this service.

City of Langley: Chapter 13.40 of Langley's municipal code addresses biosolids and composting facilities and green waste collection.

City of Oak Harbor: The City of Oak Harbor's municipal code Chapter 15.04 addresses solid waste, recycling and yard waste collection and disposal. Code 15.04.090 sets a minimum service schedule for collection of solid waste for both residential and commercial customers.

Local Utility Tax: Cities and towns are allowed to assess a utility tax on waste collection services within their boundaries. The Town of Coupeville and the City of Langley assess a 6% tax on solid waste services conducted in their jurisdictional limits, and the City of Oak Harbor assesses a 6.25% tax on private garbage collection services.

Goals for Waste Collection

Two of the goals for this Plan are applicable to waste collection:

- Promote effective waste handling methods with respect to cost and environmental protection.
- Provide customers information and education to promote recommended waste management practices.

6.2. EXISTING WASTE COLLECTION ACTIVITIES

Existing Waste Haulers

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. (part of Waste Connections) holds a certificate issued by the 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 6-1.

Table 6-1. Waste Collection Service Providers in Island County

Service Provider	Address	Population Served (2017)[1]	Land Area, square miles[2]	Density (people per square mile)[3]
City of Oak Harbor	865 SE Barrington Drive, Oak Harbor, WA 98277	22,840	9.74	2,345
Island Disposal, Inc.	P.O. Box 990, Coupeville, WA 98239	43,372	159.1	273
Waste Management	13019 41st Avenue NE, Marysville, WA 98271	16,578	39.8	417
Totals		82,790	208.6	397

Notes:
1. Population figures are from Table 2-1. Figures for Island Disposal are based on the difference between the county total (82,790 people) minus the figures for other areas.
2. From the Office of Financial Management. Figures for Island Disposal are based on the difference between the county total (208.6 square miles) minus the figures for other areas. All figures are estimates for the year 2017.
3. Density figures are calculated from the population and land area figures.

Many residents and businesses haul their own waste ("self-haul") to the waste receiving facilities. Island County accepts waste from self-haul customers at the facilities located at North Whidbey, Coupeville, Bayview, and on Camano Island. More than half of the waste generated within the planning area is collected by the three haulers (58%) and the rest is self-hauled (42%). A sampling of current rates charged for collection and disposal services is shown in Table 6-2. Rates for temporary non-residential containers may differ from the rates shown in Table 6-2. Also not shown are rates for larger containers (roll-offs and stationary compactors), which are hauled individually to transfer stations. Charges for the larger containers are based on monthly rental fees for the container plus the disposal fee for the actual amount (by weight) of garbage in the container each time it is emptied.

A separate 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.

6.3. WASTE COLLECTION PLANNING ISSUES

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

Table 6-2. Garbage Collection Fees for 2018 (Dollars/Month for Weekly Collection)			
Service Provider	City of Oak Harbor	Island Disposal, Inc.	Waste Management
Residential			
Weekly Collection			
Minican (20 gallons)	14.53	13.75	14.10
One Can (35 gallons)	19.90	17.35	16.90
Two Cans (or 65-gallon cart)	33.36	25.12	26.10
Three Cans (or 95-gallon cart)	44.37	36.29	35.30
Extra Can	n/a	3.77	4.30
Biweekly Collection[1]			
One Can	n/a	13.38	11.70
Monthly Collection			
One Can	n/a	7.20	5.60
Recycling	free	n/a[2]	9.40
Yard waste (96 gallon)	3.25-9.72[3]	n/a	9.65
Non-Residential			
1 cubic yard	102.70	98.83	91.27
1.5 cubic yards	n/a	140.21	116.95
2 cubic yards	175.21	182.91	142.33
3 cubic yards	246.25	n/a	193.26
4 cubic yards	314.24	n/a	244.76
6 cubic yards	419.55	n/a	337.82

Notes:
1. Biweekly means every-other-week.
2. Island Disposal provides residential curbside recycling service in the Town of Coupeville and the cost for this is embedded in the garbage charges.
3. Yard waste collection charges in Oak Harbor vary depending on the season, see Chapter 5 for more details.

n/a = not applicable, service level is not provided.

Current and Future Capacity

The current collection system does a good job of collecting and removing solid wastes generated by the residents and businesses in Island County. Future waste quantities have been estimated (see Table 2-9), and the existing collection system is anticipated to be able to handle the projected increase.

Recommendations from the 2017 Rate Study

A recent report prepared for Island County, the Solid Waste and Septage Rate Study for the Island County Solid Waste Program: 2017 Analysis, provided a number of recommendations for possible program changes. As noted in that report, moving to every-other-week (EOW) garbage collection would provide additional incentive for households to recycle and to divert food waste through mixed organics programs. Unfortunately, mixed organics (yard debris and food waste together) collection programs are not available on Whidbey Island at this time.

Waste Diversion Programs

Some service gaps associated with the current collection system have been noted for recycling and organics, and these are discussed in Chapters 4 and 5, respectively.

6.4. ALTERNATIVE WASTE COLLECTION STRATEGIES

The following alternatives were considered for new or expanded waste collection activities. The listing of an alternative in this section does not mean that it is considered feasible or desirable, nor that it is recommended (see Section 6.5 for waste collection recommendations). In addition, the alternatives are not listed in order of priority.

Alternative A – Mandatory Collection Services in Unincorporated Areas

Alternative A considers the establishment of mandatory solid waste collection in the unincorporated areas of Whidbey and Camano Islands. Mandatory collection in unincorporated areas could be provided through a solid waste collection district. State law (Ch. 36.58A RCW) enables a county to establish such a district.

Collection services would be provided under the regulated service provision. The UTC-designated collection company would provide the services at UTC-approved rates. The level of service provided at the solid waste receiving facilities could be reduced to reflect fewer customers.

About one-third of the households reside in the three cities and towns, where mandatory collection services already exist. Mandatory collection programs throughout the rest of Island County would provide some benefits, but not without possible drawbacks. Potential benefits include a reduction in illegal dumping; a reduced need for enforcement of illegal dumping, littering and other laws; and greater ability to provide curbside recycling programs (assuming a combination of recycling and garbage services). Mandatory collection, however, can act as a disincentive for those who are already actively trying to reduce wastes. Residents who are recycling and reducing their wastes to the maximum extent possible may not be generating enough waste to need the minimum service level (one can picked up once per month). Other residents may have legitimate concerns about placing garbage at the curb for collection, such as long driveways and animal issues in their area, and so would object to being required to do this.

Alternative B – Promotion of Voluntary Garbage 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.

Alternative C – Every-Other-Week Garbage Collection

Alternative C consists of changing residential waste collection services to every-other-week service. This step is typically done to provide additional incentive for residents to participate in curbside recycling and mixed organics collection programs, both of which are not available in all areas of Whidbey Island. If this were done, an ideal arrangement could consist of alternating weeks for collection of garbage and recyclables, plus weekly collection of mixed organics (the latter would be conducted weekly because this is where the food waste would ideally be placed, and thus it would be necessary to pick up the mixed organics more frequently to avoid odor and vermin issues). 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.

To accomplish this alternative, Island County would need to adopt a service level ordinance requiring Island Disposal and Waste Management to provide alternative services for single-family homes. 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 service level ordinance would need to describe the collection system, what commodities should be collected for recycling and the manner in which they should be collected, reporting requirements, and other important details. To implement this approach in the cities and towns, the City of Oak Harbor would need to revise their approach and the Town of Coupeville would need to revise their contract with Island Disposal.

6.5 WASTE COLLECTION RECOMMENDATIONS

The following recommendation is being made for waste collection programs:

WC1) Continue to promote voluntary subscription to garbage collection services.

More details on the implementation of these and other recommendations are shown in Chapter 11.

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CHAPTER 7

TRANSFER AND DISPOSAL

7.1. BACKGROUND FOR TRANSFER AND DISPOSAL

Introduction

This chapter of the Plan discusses the various components and options for the transfer and disposal system in Island County.

State Regulations Concerning Transfer and Disposal

State laws and regulations concerning waste transfer can be found in the Revised Code of Washington (RCW) and the Washington Administrative Code (WAC). The RCW contains the laws adopted by the State Legislature, while the WAC consists of the regulations adopted by State agencies to implement the laws contained in the RCW. Local regulations can be found in the Island County Code.

Specific laws and rules that relate to transfer and disposal activities in Island County include:

- **Chapter 36.58 RCW, Solid Waste Disposal**, authorizes counties to contract for disposal services, designate disposal sites, and to form disposal districts.
- **RCW 36.58.050** states that transfer stations included in a solid waste plan are exempt from regulation by UTC and requirements to use certificated haulers. Furthermore, it states that the county "may enter into contracts for the hauling of trailers of solid wastes from these transfer stations to disposal sites and return either by (1) the normal bidding process, or (2) negotiation with the qualified collection company servicing the area under authority of Chapter 81.77 RCW."
- **Chapter 173-350 WAC, Solid Waste Handling Standards**, provides rules for implementing Chapter 70.95 RCW and sets minimum functional performance standards for the proper handling of solid wastes. Chapter 173-350 WAC contains rules for facilities for recycling, composting, land application, anaerobic digesters, piles, surface impoundments, MRW and limited purpose landfills, as well as providing rules for beneficial use permits, ground water monitoring, financial assurance and other important activities.
- **WAC 173-350-100** defines transfer stations and drop box facilities. These facilities must meet specific design and operating standards, although closure and financial assurance standards are minimal for these types of facilities.
- **Island County Chapter 13.02:** The primary local regulations addressing transfer stations and other solid waste facilities are included in Island County's municipal code, Chapter 13.02, which addresses the Solid Waste Management System. The purpose of Chapter 13.02A.010 is to establish a comprehensive county-wide program for solid waste handling and solid waste recovery and/or reclamation. This requires effective control of the disposal of all non-exempt solid waste generated and collected within the unincorporated areas of Island County at a site or sites consistent with its comprehensive plan. Island County code states that the County desires to exercise its right to provide facilities to control the disposal

of all solid waste generated and collected within the unincorporated areas of its borders and to permit the incorporated municipalities of the county to use its facilities.

- A landfill typically operates under the rules of the county in which it is located, as enforced by the local health district, as well as State and Federal rules. The Roosevelt Regional Landfill (owned by Republic Services), where Island County's waste is currently disposed, is governed by the rules of Klickitat County and its health district. Activities at the Roosevelt Regional Landfill are also guided by an agreement between Klickitat County and Republic Services and by the conditional use permit for the landfill.

Goals for Transfer and Disposal

Two of the goals for this Plan are applicable to waste transfer and disposal:

- Promote effective waste handling methods with respect to cost and environmental protection.
- Encourage the recovery of marketable resources from solid waste.

7.2. EXISTING TRANSFER AND DISPOSAL ACTIVITIES

Existing Transfer System

There are two solid waste transfer stations and two drop box stations permitted 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. Figure 2-3 (see page 2-12) shows the locations of the transfer and drop box stations, and the current fees charged at these facilities are shown in Table 7-1.

Island County Solid Waste Complex: The Island County Solid Waste Complex (ICSWC) 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-feet weigh scales, 1,200 feet of on-site access roads, a 7,800 square feet tipping floor enclosed in a metal building, a mechanical compactor with trailer loading capabilities, a contingency truck loading bay, a trailer storage area and employee facilities. There are 15 unloading positions where self-haul waste generators may deposit waste materials into up to three 105-yard open-top trailers away from the transfer station building, with an additional 10 positions that could be used if needed. There is also an extensive recycling center operated by Island Recycling (see Chapter 4 for more details). Figure 7-1 shows the site layout for ICSWC.

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 three 105-yard trailers. A backhoe is used to compact waste material after it has been placed into the containers. The Camano Transfer Station has MRW collection containers and collection areas for e-waste and fluorescent light bulbs. There are also four 30-yard open-top containers for

Table 7-1. Current Solid Waste and Septage Fees (2018)	
Type of Waste	**Charge**
Solid waste, municipal or franchise hauler	$109/ton, plus $7.24 base fee
Solid waste, self-hauled	$115/ton, plus $7.24 base fee and 3.6% utility tax
Construction/demolition waste	$136/ton, plus $7.24 base fee and 3.6% utility tax
Oversized, hard-to-handle materials	$170/ton, plus $7.24 base fee and 3.6% utility tax
Yard and garden debris	$80/ton, plus $7.24 base fee and 3.6% utility tax
Minimum charge (up to 40 pounds)	$11.00
Septage (Coupeville only)	$0.155 per gallon
Appliances	$22.50 each
Tires (auto and light truck)	$7.50 each
Other recyclables and household haz. waste	No charge

Note: Rates may rise in the future due to increased transportation costs and other factors.

Figure 7-1
Site Layout for the Island County Solid Waste Complex

Google Earth © 2018 Google

commingled recyclables that are serviced by Waste Management (see Chapter 4 for more details) and containers for scrap metal and yard waste.

North Whidbey Drop Box Station: The North Whidbey 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, eight 20-yard recycling boxes and a compactor for plastics, fencing, landscaping and employee facilities.

Bayview Drop Box Station: The Bayview Drop Box Station is located at 5970 S. Kramer Road in Langley. 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 30-yard compacting drop boxes, three 40-yard recycling boxes, six 20-yard recycling boxes, fencing, landscaping and employee facilities.

NAS Whidbey Island: The Naval Air Station Whidbey Island (NASWI) has its own transfer station. As stated previously in this Plan, the NASWI system is not considered to be part of the Island County system.

Existing Disposal System

Existing elements of the disposal system are described below.

Transport and Disposal Operations: Island County has executed a contract with Republic Services to provide transport and disposal services for waste generated in Island County. Under the agreement, waste from Island County is trucked to either Burlington, Washington or to Everett, Washington and transported by rail to the Roosevelt Regional Landfill. The contract became effective in 2007 and was initially effective from 2007 through 2012, and then extended several times through 2023. No additional extensions may be exercised.

Closed Municipal Solid Waste Disposal Sites: There are seven closed solid waste disposal facilities in the planning jurisdiction. The general location of each site and the current ownership are identified in Table 7-2.

Table 7-2. Closed Waste Disposal Facilities in Island County

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

Post-Closure Care of the Coupeville Landfill: The Coupeville Landfill, which was closed in 1992, is subject to the post-closure monitoring requirements specified in Chapter 174-304 WAC. 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.
- 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 restrictive post-closure fund is intended to finance annual post-closure costs for a 20-year period. As the 20-year period has now passed, off-ramping is currently being studied. Routine activities are guided by a post-closure plan that was developed and approved in 2003 and updated in 2008.

7.3. TRANSFER AND DISPOSAL PLANNING ISSUES

This section discusses management issues associated with the transfer and disposal of municipal solid waste.

No New Solid Waste Disposal Facilities Allowed in Island County

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

Capacity at ICSWC

There is some concern among Island County solid waste staff that the main transfer station at the ICSWC is approaching capacity and may need to be expanded in the near future to continue to serve the needs of the garbage haulers and larger self-haul vehicles.

Self-Haul Customers at ICSWC

Concern has been expressed that the self-haul customers using the ICSWC do not always know where to go to dump their loads.

Need to Renew Waste Export Contract

State solid waste planning guidelines require jurisdictions to consider waste disposal needs for a 20-year period. Island County has a waste transport and disposal contract through the year 2023, with no additional extensions remaining. With the availability of at least three regional landfills expected to operate for the next 50 to 100 years, future disposal needs can continue to be met by a waste export system. With the current waste transport and disposal contract extended until 2023, Island County will need to begin preparing a Request for Proposals for a new contract in 2021.

New Compactor at ICSWC

A new compactor may be needed at ICSWC in approximately 10 years.

7.4. ALTERNATIVE TRANSFER AND DISPOSAL STRATEGIES

The following alternatives were considered for new or expanded transfer and disposal activities. The listing of an alternative in this section does not mean that it is considered feasible or desirable, nor that is recommended (see Section 7.5 for transfer and disposal recommendations). In addition, the alternatives are not mutually exclusive and are not listed in order of priority.

Alternative A – Conduct a Study to Determine the Need for Increased Capacity at ICSWC

Alternative A considers a study for further analysis of the need for more capacity at the County's primary transfer station. This study could include an examination of the need for a new compactor and building modifications that might be required for this.

Alternative B – Continue to Investigate "Off-Ramp" Strategies for Post-Closure Monitoring

Alternative B consists of a continuation of the efforts to scale back on monitoring at the closed Coupeville Landfill, including a reduction in the monitoring schedules and reduction in the test parameters in all or in specific wells.

Alternative C – Issue an RFP for the Waste Transport and Disposal Contract

Waste export via truck/rail and disposal in an out-of-county landfill has worked well for Island County for over two decades, and there is no strong case for changing this practice. The current waste transport and disposal agreement expires in 2023, and in order to continue with this system the County would need to begin in 2021 to prepare a Request for Proposals (RFP) for export and disposal of solid waste. That contract should include provisions for a part of the County's waste stream to be handled through alternative technologies (see next alternative), should those become viable and cost-effective.

Alternative D – Consider New Technologies for Waste Disposal

There is significant interest and development efforts underway in alternative technologies to handle solid wastes, especially for organic materials in the waste stream, but there is limited experience in applying these technologies to solid waste in the United States. Conversion technologies are a way of converting the organic portion of solid waste into energy or useful products. They require inputs of waste and energy and may involve mechanical and or thermal pretreatment. The outputs can include energy (electricity and/or heat), valuable materials, inert materials, residuals requiring disposal, and flue gas emissions that require treatment. Conversion technologies (other than waste-to-energy) still have a sparse track record of successful full-scale projects with demonstrated long-term economic feasibility from the sale of energy and/or byproducts. In addition, conversion technologies need to meet regulatory compliance and environmental protection standards to gain public acceptance. The major

types of waste conversion technologies are:

- **Pyrolysis**: Waste is broken down thermally in the absence of air, producing oil and synthetic gas that can be burned in gas turbines or gas engines to generate electricity.
- **Gasification**: This process is similar to pyrolysis, but takes place under low-oxygen conditions (less than necessary for ordinary combustion) to produce a synthetic gas that can be used to generate electricity.
- **Plasma gasification**: This process uses an electrical arc to break down organic parts of the waste into elemental gas which can then be burned in a gas turbine to generate electricity.
- **Anaerobic digestion**: This tank-based system uses microbes to digest organic waste and produce methane gas, which then powers turbines or engines to produce electricity. Sometimes the waste heat from the engines is reclaimed to heat the digester.
- **Chemical production**: Chemical and/or biological processes are used to break down the organic portion of solid waste to produce useful chemicals such as ethanol.
- **Conventional energy from waste** (EfW, formerly called incineration): This is a well-established technology for burning waste on a mechanically agitated bed and cleaning the flue gases using various types of scrubbing equipment. Most of the steam produced is used to generate electricity, although some European cities use a portion of the steam for district heating of nearby buildings. There are about 2,000 EfW plants worldwide, mostly in Europe and Asia. Scrap metals are typically recovered from EfW plants and in some areas the ash is beneficially reused.

As waste conversion technologies improve and if energy and materials markets become more favorable, it may be worthwhile to consider proposals for conversion technology facilities to process a portion of Island County's solid waste. These could be evaluated on a case-by-case basis for consistency with this Plan and with the waste transport and disposal agreement, as well as consistency with siting, zoning, environmental and health regulations. Potential adverse impacts on existing recycling and other diversion programs should be weighed against potential benefits of energy production, particularly in light of the cyclical nature of energy prices.

7.5 TRANSFER AND DISPOSAL RECOMMENDATIONS

The following recommendations are being made for waste transfer and disposal programs:

T&D1) The four Island County transfer station and drop box facilities will continue to be the designated disposal system for all solid wastes from Island County.

T&D2) A study should be conducted in 2019 to examine the need for additional capacity at ICSWC.

T&D3) Beginning in 2021, a Request for Proposal (RFP) should be prepared for a new waste export and disposal contract.

T&D4) Continue to examine options to reduce or eliminate ground water monitoring at the old Coupeville landfill.

T&D5) Evaluate future proposals for disposal facilities, anaerobic digestion, incinerators and other waste conversion technologies on a case-by-case basis for consistency with this Plan and according to other criteria appropriate to the proposed system.

More details on the implementation of these and other recommendations are shown in Chapter 11.

CHAPTER 8

MODERATE RISK WASTES

8.1. BACKGROUND FOR MRW

Introduction

This chapter is intended to provide an update of Island County's plans and programs for moderate risk waste (MRW), and to serve as an update of the County's MRW plan. As part of the solid waste plan, some of the basic requirements for an MRW plan are fulfilled by other chapters of this Plan, including information on the general background of the planning area, the identification and approvals by participating jurisdictions, the public participation process, and compliance with the State Environmental Policy Act (SEPA). This chapter is intended to address the remaining required elements of an MRW plan (see Section 1.4 for more details).

Definition of Moderate Risk Waste

Moderate risk waste (MRW) refers to waste materials that have the characteristics of and pose the same risks as hazardous wastes, but are generated in relatively small quantities by individual households and in small quantities by businesses. In other words, these wastes are flammable, corrosive, toxic, and/or reactive. Federal law does not currently regulate small quantities of these wastes as hazardous, but each state can adopt stricter regulations for hazardous waste from households and small quantity generators. Washington State has chosen to regulate these materials. Ecology created a waste classification called MRW that includes household hazardous waste and small quantity generator waste (see below for a further definition of these wastes). A State law adopted in 1991 also added used oil to the list of materials to be addressed by MRW programs.

Household Hazardous Waste (HHW): Products that are generated in a residence and that are flammable, corrosive, toxic or reactive become household hazardous wastes when they are discarded.

Small Quantity Generator (SQG) Waste: Many businesses and institutions produce small quantities of hazardous wastes and hence qualify as a small quantity generator. SQGs may produce hazardous waste at rates less than 220 pounds per month or per batch (or 2.2 pounds per month or per batch of extremely hazardous waste) and accumulate less than 2,200 pounds of hazardous waste on-site (or 2.2 pounds of extremely hazardous waste). Extremely hazardous wastes include specific pesticides and other poisons that are more toxic than other hazardous wastes. At amounts above these limits, a business becomes a medium or large quantity generator and must comply with the reporting and other requirements for hazardous waste management and disposal. SQGs are conditionally exempt from State and Federal regulation, meaning that they are exempt only as long as they generate less waste than the threshold amounts and also properly manage and dispose of that waste.

Regulations Concerning MRW

A review of the federal, state and local regulatory framework for managing hazardous waste is provided below.

Federal Regulations: The primary federal laws 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. Ecology has been delegated the authority to enforce the provisions of RCRA in Washington.
- **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 (EPA) with the authority to clean up disposal sites contaminated with hazardous waste. The legislation enables the EPA to identify responsible parties and assess liability for cleaning up individual sites. The Superfund Amendments and Reauthorization Act established 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 transportation rules to require that persons who transport, or offer for transportation, certain types of hazardous materials must develop and implement a security plan. The intent of the security plan is to prevent theft of flammable or explosive materials that could be used in acts of terrorism. This rule applies to many MRW facilities due to the types and quantities of wastes collected and shipped, and requires that employees be provided with security awareness training.

State Regulations: A number of State laws address hazardous waste management. One of the most important of these is the Hazardous Waste Management Act. 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 HHW and SQG wastes from the dangerous waste regulation. The Dangerous Waste Regulations have been amended several times over the years, most recently in 2018. The Dangerous Waste Regulations were also in the process of being amended in 2018 to incorporate several new federal rules.

- **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. The waste hierarchy is a key element in determining compliance of this Plan with State requirements for an MRW plan. In order of decreasing priority, the management priorities are:

- waste reduction
- waste recycling
- physical, chemical, and biological treatment
- incineration
- solidification/stabilization/treatment
- landfill

- **Model Toxics Control Act (Chapter 70.105D RCW and Chapter 173-340 WAC)**: The Model Toxics Control Act (MTCA) authorizes funding for a broad range of cleanup, management, and prevention activities at state and local levels. MTCA is funded by the Hazardous Substance Tax (HST), which is imposed on the first possession of over 8,000 substances in our state (although most of the revenues come from the products of the two refineries in Skagit County). Revenues from the HST are deposited into three accounts: State Toxics Control Account, Local Toxics Control Account, and Environmental Legacy Stewardship Account. The State Toxics Control Account funds Ecology's solid and hazardous waste management planning activities, enforcement, technical assistance, remedial actions, public education and emergency response training. The Local Toxics Control Account provides grants to local governments for solid and hazardous waste programs including remedial actions. MTCA also requires Ecology to set aside at least 1% of the funds for public participation grants (PPG).
- **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, adopting 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)**: Chapter 70.95 RCW 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 Solid Waste Handling Standards provide guidance on the design and operation of MRW facilities, as well as a variety of other solid waste facilities.

Local Regulations: MRW is addressed in Chapter 13.02A of the Island County Code, which prohibits the disposal of hazardous waste in Island County and provides penalties for noncompliance. MRW 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 MRW handling facility or at a waste management facility approved by the Department of Ecology. The regulation states that MRW 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.

Goals for MRW

A number of the goals for this Plan are applicable to MRW:

- Promote effective waste handling methods with respect to cost and environmental protection.
- Emphasize waste reduction and recycling as fundamental management strategies.
- Assist the State to achieve its solid and hazardous waste management goals.
- Assist those who sell and use products containing hazardous ingredients to minimize risks to public health and the environment.
- Provide customers information and education to promote recommended waste management practices.

The State Solid and Hazardous Waste Plan

Additional policy guidance is provided by the State solid and hazardous waste plan, Moving Washington Beyond Waste and Toxics. Commonly referred to as the "Beyond Waste" plan, this plan addresses hazardous wastes as well as solid waste. One of the five sections of this plan is "Managing Hazardous Waste and Materials." The background information for this initiative explains that perhaps as little as 1% of SQG waste is properly managed on a statewide basis. For HHW, only about 16% (statewide) is estimated to be collected through local programs. The Moving Washington Beyond Waste and Toxics plan provides the following goals pertaining to MRW:

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

8.2. EXISTING MRW PROGRAMS

Introduction

This section of the MRW chapter describes existing conditions and programs, including an inventory of facilities and generators. The information provided in this section is largely guided by the requirements for an MRW plan. Those requirements (from RCW 70.115.220(1)(a)) include an assessment of the quantities, types, generators and the fate of MRW in each jurisdiction, and so the following information includes potential MRW generators, dangerous waste generators (i.e., large quantity generators), contaminated sites, transporters and processing facilities, and locations where hazardous waste facilities are allowed to be sited ("zone designations"). In addition, Ecology's guidelines (Guidelines for Developing and

Updating Local Hazardous Waste Plans, February 2010) state that MRW plans should address services in six areas:

1. Household hazardous waste collection.
2. Household and public education.
3. Small business technical assistance.
4. Small business collection assistance.
5. Enforcement.
6. Used oil education and assistance.

The following information addresses all of the above items.

MRW Generation Projections

Waste composition studies in other areas demonstrate that residents and businesses continue to dispose of MRW in the solid waste system despite the availability of more appropriate handling systems for those materials. Waste composition studies in Snohomish County in 2009 and Thurston County in 2014, for instance, show 0.09% and 0.10% hazardous wastes, respectively, in the solid waste streams of those two counties. Applying the 0.10% figure to Island County's 2017 waste quantity (53,036 tons) leads to an estimate of 53 tons of MRW that is being co-disposed with solid waste. Based on the 163 tons of MRW collected in 2017, this means that slightly more than three-quarters (75.5%) of the MRW generated in Island County was collected and properly disposed. Table 8-1 shows projected future quantities of MRW based on these figures and the projected population growth for Island County (see Table 2-2).

The figures shown in Table 8-1 assume that the current per capita generation and disposal rates for MRW will continue at the same levels as in 2017. The recent trend for MRW, however, indicates that there has been a decreasing amount of MRW being generated, and so likely the figures for 2020 to 2035 will actually be lower.

It should be noted that the 2017 figure of 163 tons of MRW collected through the County's system may include a small amount of material from outside of the planning area (i.e., HHW from Naval Air Station Whidbey Island) but this figure also does not include the materials set aside for reuse and the significant amounts of used oil and other materials handled through other collection systems. Likewise, the estimate of MRW that is co-disposed with solid waste (53 tons) may include hazardous materials from large quantity generators, which by definition

Table 8-1. Projected MRW Quantities for Island County

	2017	2020	2025	2030	2035
MRW Disposed, tons/year	53	54	56	58	59
MRW Collected, tons/year	163	165	172	177	181
Total MRW Generated, tons/year	216	219	228	234	240

Source: Based on 2017 collection and disposal figures, and on projected population growth (Table 2-2).

should not be included as MRW. If adjustments could be made for these various factors, the recovery rate for MRW in Island County could be higher than the estimated 75.5%.

Moderate Risk Waste Composition

Table 8-2 shows the quantities of materials collected through the County's MRW collection system. As can be seen in that table, a little more than one-half (54.0%) of the moderate risk waste collected in 2017 was used motor oil and old fuel. A small amount of the materials collected are actually not classified as hazardous (alkaline batteries and some liquids). These figures do not include the materials that were provided to BaRC (a non-profit reuse center at ICSWC) for reuse in the past. The total amount of hazardous materials collected (326,424 pounds) is the source of the collection figure (163 tons) used in the above analysis.

Table 8-2. MRW Quantities Collected in 2017 (pounds)

Type of Material	Pounds	Percent of Total
Hazardous Materials		
Used Oil and Fuels	183,446	54.0%
Oil-Based Paints	51,986	15.3%
Mixed-Chemistry Batteries	23,354	6.9%
Antifreeze	21,080	6.2%
Fluorescent Lamps	18,567	5.5%
Garden Chemicals	10,844	3.2%
Aerosols	6,430	1.9%
Corrosive Bases	3,473	1.0%
Corrosive Acids	3,405	1.0%
Petroleum-Contaminated Debris	251	0.1%
Chlorofluorocarbons	238	0.1%
Flammable Solids	209	0.1%
Oxidizers	26.5	0.0%
Other, Miscellaneous	3,114	0.9%
Subtotal, Hazardous Materials	**326,424**	**96.2%**
Non-Hazardous Materials		
Alkaline Batteries	9,505	2.8%
Non-Hazardous Liquids	3,503	1.0%
Subtotal, Non-Hazardous Materials	**13,008**	**3.8%**
Total	**339,432**	**100.0%**

Source: Island County records.

Current Collection Programs

Island County MRW System: Drop-off collection services are provided for HHW at the North Whidbey, Coupeville, Bayview and Camano solid waste facilities. The North Whidbey, Bayview

and Camano facilities are satellite facilities supported by the primary MRW collection and processing facility at the Coupeville facility (ICSWC). Household hazardous waste can be delivered to any of the facilities during normal operating hours, but large loads and SQG wastes are required to be taken to ICSWC. For SQGs, advance notification of delivery and a scheduled appointment is requested to verify the generator status of the business or institution producing the waste.

With the exception of used motor oil and lead-acid batteries, all MRW collected at the County facilities is transported to the MRW facility at the ICSWC. The waste materials are sorted according to their hazard classification and packed into U.S. Department of Transportation approved containers ranging from five gallons to one cubic meter. Fuels, oil and antifreeze are collected in 55 to 500-gallon tanks and transferred into bulk carrier trailers for transportation to the appropriate processing or disposal facilities. Other materials are packed into drums or pallet boxes in their original containers. The drums are stored at the facility until truckload quantities are available for transport.

The four County transfer station and drop box facilities have waste oil collection tanks for oil accepted from do-it-yourself (DIY) customers from homes and watercraft. Oil from SQG customers is accepted at ICSWC during MRW hours of operation and the Camano site by appointment. Waste oil is tested for chlorine by the County's service provider (ORRCO) before being removed from the collection tanks. Signage on the tanks alerts DIY customers to the importance of not adding gasoline, antifreeze, cooking oil and other contaminants. Education about waste oil and other aspects of the MRW program is accomplished through the County's website and brochures.

Over the past ten years, the number of individuals bringing MRW to County facilities declined steadily from 2008 to 2013 and then increased substantially in recent years. Participation figures for the four solid waste facilities are shown in Table 8-3. As can be seen in this table, the number of customers more than tripled from 2013 to 2017. Table 8-4 and Figure 8-1 show figures for participation over a ten-year period. The quantity of waste dropped off by these customers has followed a similar pattern, except that the increase since 2013 has been relatively less. The decrease in quantities from 2012 to 2013 can likely be explained by the decision to stop accepting latex paint in May 2012, since latex paint had previously accounted

Table 8-3. MRW Customers at the Four Solid Waste Facilities

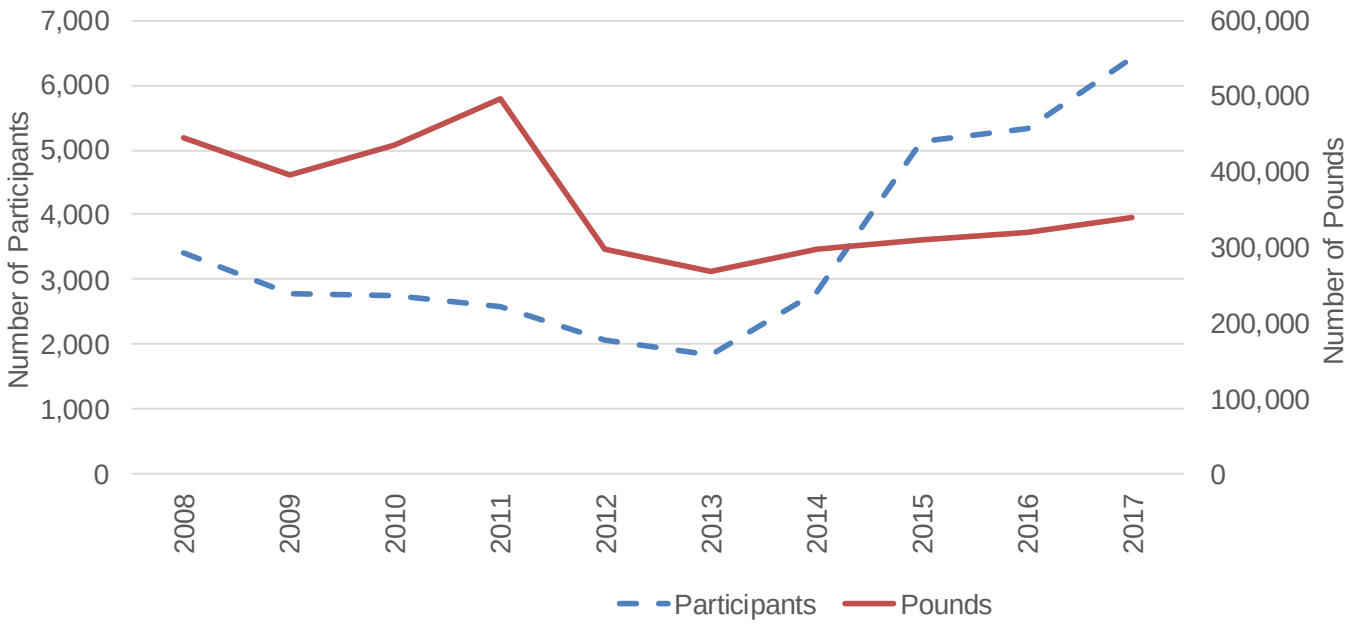
Facility	2013	2014	2015	2016	2017
Bayview Drop Box	456	953	1,148	1,276	1,563
Camano Transfer Station	517	723	1,957	1,888	2,214
ICSWC	709	813	1,294	1,318	1,230
N. Whidbey Drop Box	146	309	745	863	1,399
Total Visits (Customers)	**1,828**	**2,798**	**5,144**	**5,345**	**6,406**

Source: Island County records.

Table 8-4. Total MRW Customers			
Year	Number of Customers (visits) at County Facilities	Amount of Waste Handled (pounds)	Pounds per Customer
2008	3,410	445,014	131
2009	2,785	395,079	142
2010	2,749	435,539	158
2011	2,578	496,647	193
2012	2,058	298,346	145
2013	1,828	268,006	147
2014	2,798	296,434	106
2015	5,144	309,122	60
2016	5,345	318,436	60
2017	6,406	339,432	53

Source: Island County records.

Figure 8-1
Number of Customers and Pounds Handled by Island County MRW Facility



for 28% of the incoming materials. Customers with latex paint are now directed to reuse opportunities (if they have usable quantities of paint) or to solid waste disposal (since latex paint isn't actually a hazardous waste). The more significant decrease in pounds per customer occurred well after this impact, however, which appears to indicate that Island County residents are purchasing less hazardous materials and/or doing a better job of using up what products they do purchase. Other possibilities are that residents are making more frequent trips to drop off smaller amounts of HHW, but it seems unlikely that this would cause a tripling of the number of participants since 2013, and better record-keeping plus the fact that motor oil customers are also being tracked now too.

Other Drop-Off Programs: Several other programs collect used oil and other MRW in Island County. Additional drop-off locations for used oil include Auto Zone in Oak Harbor, Napa Auto Parts in Oak Harbor, and O'Reilly Auto Parts in Oak Harbor. All three of these companies also have locations in Stanwood (which is outside of Island County but serves Camano Island). The Auto Zone and O'Reilly Auto Parts stores also accept lead-acid (vehicle) batteries, as does Christian's Auto Recycling in Oak Harbor and Island Recycling in Coupeville and Freeland.

Four locations in Island County accept electronics ("e-waste"). A statewide program (E-Cycle Washington) funded by electronics manufacturers allows designated sites to accept certain electronics for free, including televisions, computers, monitors, laptops, tablets, e-readers and portable DVD players. Some sites might also accept keyboards, printers and cell phones, although fees may apply to these items. Since this program began in 2009, it has collected 188,031 tons of electronics (as of early August 2018). Collection sites in Island County that are organized through the E-Cycle Washington program include Island Recycling in Freeland and the North Whidbey, Coupeville, and Camano solid waste facilities. In the first seven months of 2018, these four sites collected 230,493 pounds (115 tons) of e-waste.

Another statewide program exists for fluorescent bulbs and other mercury-containing light bulbs. The LightRecycle Washington program is funded by an "environmental handling charge" on the sale of new mercury-containing light bulbs. Collection sites in Island County for these light bulbs includes all four of the Island County solid waste facilities and three Ace Hardware stores (on Camano Island and in Freeland and Oak Harbor).

Rechargeable batteries and cell phones can be recycled through collection boxes at the Home Depot in Oak Harbor and the Stanwood Hardware store in Stanwood (outside of Island County but serving Camano Island). This is organized by Call2Recycle, which was renamed from the Rechargeable Battery Recycling Corporation (RBRC) in 2013. Call2Recycle is a stewardship and recycling program that is voluntarily funded by the major battery manufacturers.

Other Collection Programs: Collection programs in Island County include curbside collection service for used motor oil and lead-acid batteries provided by the City of Oak Harbor as part of its residential recycling program. The batteries are picked up by Interstate Batteries from the city's shop as needed. American Petroleum Environmental Services picks up the used oil from bulk oil tanks at the shop.

There are also several private collection services for hazardous waste generated by medium and large quantity generators.

Transport and Disposal

From the MRW Facility, MRW is transported to licensed hazardous waste treatment, storage and/or disposal facilities. Hazardous waste treatment and disposal services are currently provided by Clean Harbors under a State of Washington service contract. MRW that cannot be recycled is treated, interred in a permitted hazardous waste landfill, or destroyed through high-temperature incineration by the contractor.

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 MRW education program includes dissemination of printed information through local newspapers, brochures, information booths, a website (www.recyclewhidbey.net), presentations at public events and oral responses to telephone inquiries. The WSU Extension Waste Wise Program assists with the information and education program.

Small Quantity Generator Education and Technical Assistance

Outreach and education for SQGs is an ongoing activity. Technical and disposal assistance is provided on an as-requested basis. SQG outreach is being performed currently by the WSU Extension Waste Wise Program.

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.

Cooperative Agreement with NAS Whidbey Island (NASWI)

Island County previously had an agreement with NASWI's private contractor (Hunt Companies) that allowed military personnel and their dependents residing in government quarters at NASWI to deliver household hazardous waste to County collection stations. That contract expired at the end of 2018.

Inventory of Generators and Facilities

The following information addresses dangerous waste generators, contaminated sites, transporters and processing facilities, and locations where hazardous waste facilities are allowed to be sited ("zone designations").

Dangerous Waste Generators: Ecology's records show that the following businesses and institutions in Island County are registered as hazardous waste generators as of July 2018:

- 3 large quantity generators: Naval Air Station Whidbey Island SPG, Naval Air Station Whidbey Island Ault, and Nichols Bros. Boat Builders Inc.
- 2 medium quantity generators: Wal-Mart and Home Depot in Oak Harbor.

- 13 small quantity generators.

The number of small quantity generators shown above includes only those that have chosen to get an EPA identification number (which is not required for small quantity generators), and the actual number of SQGs in Island County is substantially higher.

Remedial Action Sites: Ecology's list of confirmed and suspected contaminated sites in Island County can be found at https://fortress.wa.gov/ecy/gsp/SiteSearchPage.aspx. The sites can be summarized in five categories (data on the number of sites shown below is current as of July 2018):

- **Brownfield Sites** – There are no current brownfield sites. Brownfield sites are abandoned or under-utilized properties where potential liability due to environmental contamination and clean-up costs complicate redevelopment. In 2016, Ecology changed their information system to track only publicly-funded brownfield sites rather than all brownfield sites.
- **Environmental Covenants Register** – There are two current sites in Island County on this registry. This registry is a list of sites that have residual contamination after the clean-up has been completed. These sites have environmental covenants or deed restrictions limiting the types of uses on the property.
- **Leaking Underground Storage Tanks** – There are no current known leaking underground storage tanks.
- **Regulated Underground Storage Tanks** –Washington State regulates storage tanks on different properties, including gas stations, industries, commercial properties, and governmental entities:
  a) Operational sites – 118 sites.
  b) Removed sites – 45 sites.
  c) Temporarily closed sites – 4 sites.
  d) Deferred sites – 0 sites.
  e) Red tag sites– 0 sites.
- **State Clean-Up Sites** – This report contains information about sites that are undergoing clean-up and sites that are awaiting further investigation and/or clean-up, including:
  a) Sites awaiting cleanup – 18 sites.
  b) Contaminated sites – 31 sites. Clean-up activities have been initiated at these sites but not yet completed.
  c) "No Further Action" sites – 1 site. This site was previously on the Confirmed and Suspected Contaminated Site list but has received a No Further Action decision. This site may have deed restrictions or environmental covenants.

Hazardous Waste Services (Transporters and Facilities): The only facility known to be managing hazardous wastes in Island County is the County's MRW facility at the Island County Solid Waste Complex. There are numerous companies that are registered in Washington as hazardous waste transporters that could be providing collection and transportation services in Island County. More information about potential hazardous waste service providers can be found on Ecology's website and also on the website for King County's local hazardous waste

management program.

Zone Designations: As part of the development of the original MRW plans, local jurisdictions were required by State law (RCW 70.105.225) to designate zones within their borders where hazardous waste facilities would be permitted to operate and to notify Ecology of those designations. In Island County, Ecology's records indicate that the Town of Coupeville designated commercial and industrial park districts for this zone and that the City of Oak Harbor requires accessory use and conditional permits for this activity.

8.3. PLANNING ISSUES FOR MRW

This section discusses management issues associated with MRW.

NASWI Agreement

The agreement between Island County and NASWI should be renewed to provide the navy base with a cost-effective method for handling HHW.

Funding for MRW

Funding for MTCA continues to be a challenge due to the heavy reliance of this fund on taxes charged on petroleum products. The value (or prices charged) for petroleum products has been highly variable in recent years, and the recent decrease in these prices is creating a shortfall in the MTCA funds. The State budget and Ecology programs are taking steps to address the shortfall, including delaying some cleanup projects and delaying the hiring of staff.

Funding for the Local Solid Waste Financial Assistance (LSWFA) grants (what used to be called CPG grants) has decreased from $28 million for the two-year grant cycle of 2013 to 2015, to $15 million for the 2015 to 2017 cycle, to $10 million for the 2017 to 2019 cycle. Many of the counties in Washington use these funds for the MRW programs, as does Island County, and so these cutbacks have increased the financial burden associated with MRW for the counties. Additional funding cutbacks in the future could cause programs to be cut back as well.

Product Stewardship

Several attempts have been made in recent years to adopt legislation for a paint stewardship program in Washington similar to programs in other states. This approach could reduce the costs for the MRW program in Island County.

8.4. ALTERNATIVE STRATEGIES FOR MRW

The following alternatives were considered for new or expanded MRW programs. The listing of an alternative in this section does not mean that it is considered feasible or desirable, nor that it is recommended (see Section 8.5 for MRW recommendations). In addition, the alternatives are not listed in order of priority.

Alternative A – Support for Product Stewardship Programs

Product stewardship programs generally rely on financial support and possibly other involvement by manufacturers of specific products that pose handling and disposal problems. The system used in Washington for some types of electronics is an example of a product stewardship program and this program has been successful in diverting many tons of old electronics from being disposed in landfills. Some types of materials and products could be addressed through local programs, but these programs are generally more effective when enacted on a statewide basis. Island County could evaluate product stewardship proposals and support those that are consistent with County programs.

Alternative B – Education and Technical Assistance for Small Quantity Generators

Alternative B would increase the outreach and technical assistance activities for small quantity generators. This outreach program could attempt 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 could be provided for the routine collection and management of small quantity waste material through both commercial collection services and the Coupeville drop-off facility. The annual cost for this approach is estimated at $40,000.

Alternative C – Establish User Fees for Household Hazardous Waste Services

There are no fees currently assessed for household hazardous waste services, although small quantity generators are charged for disposal costs and supplies used to package the wastes. Instead, household hazardous waste costs are covered through a surcharge on solid waste tipping fees and grant funds from Ecology. This alternative would establish a nominal user fee for household hazardous waste services (such as $10 for each participant). The fee would acknowledge that there are costs associated with managing hazardous waste and perhaps encourage waste reduction. On the other hand, a fee could discourage proper handling of HHW.

Alternative D – Collaborative Effort to Restore Funding

Alternative D would involve a collaborative effort with other counties and agencies to address the decrease in funding for MTCA programs and LSWFA grants. Working together, the counties could attempt to convince the State legislature that these activities are a higher priority, and alternative sources of funding could also be sought.

8.5 MRW RECOMMENDATIONS

The following recommendations are being made for MRW programs:

MRW1) Support legislation for new product stewardship laws if consistent with Island County programs.

MRW2) Continue collaborative efforts to restore MTCA and LSWFA funding for solid waste and MRW grants and programs.

More details on the implementation of these and other recommendations are shown in Chapter 11.

CHAPTER 9

MISCELLANEOUS WASTES

9.1. BACKGROUND FOR MISCELLANEOUS WASTES

Introduction

This chapter of the Island County Solid and Moderate Risk Waste Management Plan (the Plan) reviews the generation, handling and disposal methods for several types of wastes that merit special attention. These wastes require special handling and disposal methods due to regulatory requirements or for reasons such as toxicity or other special handling problems.

The following wastes are discussed in this chapter:

9.2 Asbestos
9.3 Biomedical wastes
9.4 Biosolids and septage
9.5 Cannabis-related wastes
9.6 Construction and demolition wastes
9.7 Petroleum-contaminated soils
9.8 Pharmaceuticals

The existing programs and facilities in Island County for each of these wastes are described in this chapter. Each waste is also examined for needs and opportunities (planning issues), and alternatives are proposed based on those needs if necessary. Recommendations are provided for some of the wastes, although in other cases the existing practices were found to be adequate and so no recommendations are needed.

Goals for Miscellaneous Wastes

A number of the goals adopted for this Plan are applicable to these wastes:

- Promote effective waste handling methods with respect to cost and environmental protection.
- Assist those who sell and use products containing hazardous ingredients to minimize risks to public health and the environment.
- Provide customers information and education to promote recommended waste management practices.

9.2. ASBESTOS

Asbestos is a naturally-occurring fibrous mineral with resistance to heat, chemicals, and electricity. Before it was banned in the 1980s as a cause of respiratory diseases and cancers, asbestos was widely used in a variety of building materials such as siding, insulation, fireproofing, ductwork, and piping. Although asbestos is still used in some products, today it is

most often encountered during the demolition of old buildings or removal of old piping, ductwork, boilers and furnaces during building renovations. Airborne asbestos particles are the primary health concern, as these particles become lodged in the lungs when breathed in and then cause long-term health problems.

Regulation of Asbestos

The disposal of asbestos is regulated by federal, state and county regulations. This extensive enforcement is largely due to health concerns for those who handle asbestos removal and disposal. On a federal level, asbestos was one of the first hazardous air pollutants regulated under Section 112 of the Clean Air Act of 1970, and many applications were forbidden by the Toxic Substances Control Act (TSCA). On a local level, the Northwest Clean Air Agency (NWCAA) is the primary government agency responsible for enforcing federal, state and local air quality regulations in Island County. Asbestos removal and disposal is addressed in Section 570 of NWCAA's regulations. NWCAA works closely with the following agencies:

EPA (for the National Emission Standards for Hazardous Air Pollutants)
Occupational Safety and Health Administration (OSHA)
Washington Department of Labor and Industries
Washington State Department of Ecology (Ecology)
Island County

In Island County, all homeowners and contractors must apply for an Island County demolition permit if they are conducting remodeling or demolition projects. On this permit, they must provide a plan showing all existing structures and the structure proposed to be demolished. If the structure is larger than 120 square feet, the applicant must contact NWCAA to see if an inspection for asbestos is required.

Island County code (Chapter 8.08B) defines asbestos-containing material as "any material containing more than one (1) percent asbestos as determined using the method specified in EPA regulations appendix A, subpart F, 40 CFR part 763, section 1, polarized light microscopy." This code also defines asbestos-containing waste material as "any waste that contains or is contaminated with asbestos-containing material. Asbestos-containing waste material includes asbestos waste from control equipment, materials used to enclose the work area during an asbestos project, asbestos-containing material collected for disposal, asbestos-contaminated waste, debris, containers, bags, protective clothing, or HEPA filters. Asbestos-containing waste material does not include samples of asbestos-containing material taken for testing or enforcement purposes."

Existing Management Practices for Asbestos

Asbestos-containing materials (ACM) are not accepted at any of the Island County solid waste facilities. Questions about asbestos disposal are referred to NWCAA, and information on removal and disposal methods can be found on NWCAA's website (www.nwcleanair.org). Homeowners and contractors are required to file a "notice of intent" with NWCAA for asbestos removal projects and they may be required to hire an inspector who is specially trained and certified to do asbestos surveys.

Ecology tracks asbestos disposal quantities through the annual landfill reporting system. The amounts of ACM disposed from sources in Island County over the past ten years are shown in Table 9-1. As can be seen in this table, there is a fairly steady amount of ACM still being removed and disposed, with some variations likely tied to special demolition projects.

Table 9-1. Annual Asbestos Disposal Tonnages

Year	Total ACM, TPY
2006	48
2007	97
2008	104
2009	87
2010	244
2011	55
2012	9
2013	50
2014	71
2015	71
2016	73

Source: Ecology records, based on annual reports from disposal facilities.

Planning Issues for Asbestos

Island County Planning and Development Services issues demolition permits specifying that applicants must contact the Northwest Clean Air Agency to see if an asbestos inspection is required when a structure is larger than 120 square feet. Structures less than 120 square feet could also possibly contain asbestos, thus posing a potential health risk for workers at County-operated waste facilities and private sector construction debris recycling facilities. There are, however, no known incidents of this occurring in recent years in Island County.

Recent changes to EPA rules for asbestos have raised concerns that it may be more widely used in the future, leading to increased amounts of ACM and increased human exposure to asbestos. It is unclear at this point whether more asbestos will be used in the future, however, due to the potential liability associated with it.

Asbestos Management Alternatives

Improved disposal practices for asbestos could be accomplished through the following alternative.

Miscellaneous Waste Alternative A – Asbestos Inspections for All Demolition Projects: This alternative considers expanding the requirement for an asbestos inspection to include demolition and remodeling projects under 120 square feet in addition to the current requirement that applies to projects over 120 square feet.

Recommendations for Asbestos

The exemption from asbestos inspections for small demolition projects could potentially be creating problems, but there are no reports or records to indicate that this is a significant problem. The existing asbestos disposal system appears to be working well, hence no recommendations are being made for asbestos at this time.

9.3. BIOMEDICAL WASTES

Biomedical waste includes waste contaminated by human or animal blood or diseases, and includes used syringes ("sharps"). Biomedical waste can be generated in homes, farms, medical facilities, laboratories, dental offices, veterinary clinics, and funeral homes.

Regulation of Biomedical Wastes

The majority of Washington's requirements for the management of biomedical waste are established by local health departments based on State regulations. Island County Code 8.08B.330 regulates the collection, management, and disposal of biomedical wastes generated within the County.

The Department of Ecology has established applicable solid waste regulations related to disposal of biomedical waste in solid waste landfills. The Washington Utilities and Transportation Commission regulates transporters of biomedical wastes and has issued statewide certificates to two private companies for it: Waste Management and Stericycle. Non-residential generators of biomedical wastes such as hospitals and clinics can contract with the certificated haulers to dispose of biomedical wastes. The rules governing the transportation of biomedical waste include adoption of federal Department of Transportation rules.

RCW 70.95K.010N and Island County Code 8.08B.330 define biomedical waste to include the following types of waste:

- **Animal waste**: This includes animal carcasses, body parts and the 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**: This is waste which is contaminated with blood, excretions, exudates, or secretions from humans or animals who are isolated to protect others from highly communicable infectious diseases that are identified as pathogenic organisms assigned to biosafety level 4 by the Centers for Disease Control manual, Biosafety in Microbiological and Biomedical Laboratories, current edition.
- **Cultures and stocks**: These wastes are 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**: This includes discarded waste human blood and blood

components, and materials containing free flowing blood and blood products.

- **Pathological waste**: This includes biopsy materials, tissues, and anatomical parts from humans that emanate from surgery, obstetrical procedures and autopsy. This does not include teeth, human corpses, remains and anatomical parts that are intended for interment or cremation.
- **Sharps**: This category of waste includes all hypodermic needles, syringes, IV tubing with needles attached, scalpel blades, and lancets that have been removed from the original sterile package.

Existing Management Practices for Biomedical Wastes

Per Island County Code 8.08B.330, every biomedical waste generator (including hospitals, clinics, doctor and dentist offices, veterinarians, funeral homes and similar) 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. 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 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.

Individual residents who generate hypodermic needles are not regulated as are clinics and agencies. Residents may collect used hypodermic needles in either a labeled sharps container available at pharmacies or in a two-liter polyethylene terephthalate (PET) plastic beverage container. Residents are instructed to label the container as “SHARPS” and to tape the lid shut. These containers can be delivered to one of four Island County solid waste facilities; the Island County Solid Waste Complex (ICSWC) in Coupeville, the Camano Transfer Station or to the North Whidbey or Bayview Dropboxes. Residents need to let the attendant know they are disposing of sharps, and then they will be directed where to safely dispose of them.

Health care and veterinary facilities must notify the Island County Solid Waste Division prior to transporting sharps for disposal at either the ICSWC or the Camano Island Transfer Station. Upon arriving at the inbound scale, they need to notify the scale house attendant that they have “clinical sharps for disposal.” The scale house attendant will direct the generator to dispose of the sharps containers in an open-top trailer that is no more than half full; and to notify solid waste staff of the presence of sharps in the trailer. Containers with sharps must be transported separately from general solid waste to either of these two solid waste facilities and cannot be placed with regular trash in clinic or health facility dumpsters or trash cans. Disposal is required within 90 days of generation.

Public Health, Human Services, and the Sheriff's office have created an outreach program aimed at reducing the risk of blood-born and skin infections from contaminated needles and syringes. Public Health has specifically focused on reducing opiate related health impacts in the community. Public Health is involved with this program in several ways, including needle exchange opportunities. Public Health has three locations in the county where needles and syringes can be exchanged, including Public Health offices at 127 East Camano Drive on Camano Island, the South Whidbey location in Langley at 5475 Maxwelton Road, and the Oak Harbor location at 1791 NE 1st Avenue. In addition to reducing the risk of blood-born and skin infections, this approach provides an opportunity to direct people toward treatment options and provides other health guidance in a confidential environment.

Planning Issues for Biomedical Wastes

Some sources of biomedical wastes, especially residential sources, 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.

Containers of sharps are occasionally improperly placed in the recycling system, where they pose a safety risk to the staff at the facilities that handle the recyclables.

Needle exchanges have been shown to be effective in reducing improper disposal of sharps. There is an existing needle exchange program operating in Island County, though it is possible that more outreach would increase the number of needles exchanged.

Biomedical Waste Management Alternatives

Improved disposal practices for biomedical waste could be accomplished through the following alternatives.

Miscellaneous Waste Alternative B – Increased Education: More education could be conducted to promote safe handling and disposal of sharps. Residential sources could be targeted with the assistance of home healthcare agencies and pharmacies. One form of education could be site visits to train staff at targeted facilities. More brochures could be made available at public locations and businesses, and as inserts mailed with garbage or other utility bills. Haulers could also inform their commercial customers (those that are potential generators of sharps) about safe disposal practices.

Miscellaneous Waste Alternative C – Increased Enforcement: Increased enforcement activities and larger penalties could be implemented for improper disposal of biomedical waste (although in most cases, the source for the sharps cannot easily be determined).

Miscellaneous Waste Alternative D – Increased Funding for the Needle Exchange: The existing needle exchange provides a safe method for disposing of sharps and should be continued. The exchange's activities could be expanded or could be publicized better.

Recommendations for Biomedical Wastes

The following recommendation is being made for biomedical wastes:

MW1) The needle exchange program should be continued.

More details on the implementation of these and other recommendations are shown in Chapter 11.

9.4. BIOSOLIDS AND SEPTAGE

Biosolids is a treated organic material that is derived from sewage solids. Sewage sludge, septic wastes, food particles and other organic solids can be recycled into a fertilizer that is safe to apply to land for both agricultural and garden settings. It is high in plant nutrients and be can used instead of a synthetic fertilizer. It has been shown to improve soil structure by increasing water holding capacity, improving tilth, and reducing soil erosion.

Regulation of Biosolids and Septage

On the federal level, the Clean Water Act is the primary law governing water pollution and has been the driving force for proper management of biosolids. Section 405 of this Act sets the framework for sewage sludge (biosolids) regulations and the management of residuals from wastewater treatment processes under the National Pollutant Discharge Elimination System (NPDES) permit program. These standards consist of general requirements, pollutant limits, management practices, monitoring frequency, recordkeeping requirements and other standards for the final use or disposal of biosolids that are generated from the treatment of domestic sewage. These standards address biosolids applied to the land, placed on a surface disposal site, or burned in an incinerator.

The Environmental Protection Agency (EPA) classifies biosolids into two types:

- **Class A Biosolids**: Biosolids that are pathogen free and available for the public for general use in landscaping or gardening**.**
- **Class B Biosolids:** Biosolids that have been treated to remove 95-99% of pathogens, a level deemed safe for land application. Class B biosolids can only be applied to permitted sites where public access and crop harvests are restricted for a period of time after application.

Both classes of biosolids are tested for pathogens, metals, and vector attractions. The City of Langley produces Class A biosolids and Island County Solid Waste produces Class B biosolids.

The biosolids rule, Chapter 173-308 WAC, was drafted in 1998 and most recently updated in 2007. It sets the requirements for permitting and plans that must be followed by anyone who produces or uses biosolids in Washington. This state rule incorporates all of the legal requirements of the federal rule, but goes further to require specific plans for land application and additional public notice requirements.

The biosolids rule establishes:

- Standards and frequency for analysis of biosolids.
- Agronomic rate and beneficial use requirements.
- Rules for septage.
- Permitting requirements and fees.
- Access restrictions to land application areas.

Island County Code 8.08B sets the locals standards for using biosolids and septage as a soil amendment. Ecology handles biosolids permits, including short-term sites, one-time only sites, and dedicated sites. Biosolids can only be applied up to a rate specified by a health officer and approved by Ecology on a case-by-case basis.

Existing Management Practices for Biosolids and Septage

In Island County, most of the domestic septage goes to the Island County Septage Treatment Plant located at ICSWC in Coupeville. This plant was upgraded in 2017 at a cost of $2.5 million and has the capacity to handle all of the septage generated on Whidbey Island. The septage goes through physical and biological processes to clean the wastewater and remove the solids. The treatment process produces sanitized wastewater ("supernatant") that is applied to forested land at the ICSWC and Class B biosolids that is applied only to permitted pasture lands with low potential for public exposure. Proper evaluation of this land is required to qualify for a permit for use of this material. In addition, EPA rules prohibit animals from grazing on the treated land until 30 days after applying biosolids and access to the land must be restricted for 30 days after the biosolids have been applied.

Permitting of new application sites in Island County is conducted by the County at no cost to the land owner. The County evaluates the soil characteristics, slope, water supplies, crop needs, vegetation, and distance to surface and ground water. If biosolids are applied, the property is then tested regularly by the County to ensure safe application and nutrient levels.

The City of Langley composts their biosolids with yard waste and the resulting compost is given away (see Chapter 5 for more details). Septage from Camano Island goes to wastewater treatment plants in neighboring areas (mostly to the Town of La Conner Treatment Plant).

Biosolids and Septage Planning Issues

Island County lost their access to a local application site for biosolids early in 2018 without much prior notice and as a result had to ship 2.5 million gallons of biosolids to Blaine, Washington. Another local application site is being sought.

There is a concern that biosolids may contain low levels of pharmaceuticals and personal care chemicals, although there is no evidence that current practices are creating a problem.

Biosolids and Septage Management Alternatives

The lack of a local application site for biosolids is a problem that is already being addressed by the Island County Solid Waste Division. There is an alternative that would also help address this problem.

Miscellaneous Waste Alternative E – Compost Biosolids with Yard Waste: As an alternative to land application, the biosolids from the Island County Septage Treatment Plant could be composted with yard waste. Yard waste generally works well for this because it adds bulk and a carbon source. The resulting compost would be a Class A material (assuming appropriate composting methods are used) and would have a wider range of applications than the original biosolids. The cost to install and operate this type of facility would be significant (see Alternative B in Chapter 5 for more details). A pilot project could be conducted to determine the best handling practices and costs for the biosolids from the Septage Treatment Plant.

Recommendations for Biosolids and Septage

The following recommendation is being made for biosolids and septage:

MW2) Island County should conduct a pilot project for composting biosolids with yard waste.

More details on the implementation of this and other recommendations are shown in the Implementation Chapter (Chapter 11).

9.5. CANNABIS-RELATED WASTES

The legalization of cannabis and cannabis-containing products in Washington State in 2012 has created a large new industry in Washington. In the first four years of operation (2014 through 2017), this industry generated almost $3.4 billion in sales and slightly more than $1 billion in tax revenues. There are currently (as of August 2018) 474 retailers and 1,361 producers and processors in the state, including three retailers and 11 producers/processors in Island County (although only half of the latter appear to be active currently).

As with any large industry, the amount of wastes produced by this industry is significant. Several types of wastes are potentially produced by this industry, including:

- Agricultural wastes from growing crops and also vegetative materials that have had the active ingredients extracted or have been otherwise processed.
- Solvents and other potentially hazardous wastes from extraction processes.
- A variety of packaging and other materials.
- Unsold products or products that have been damaged at a retail outlet.

These wastes could be a problem if residuals with active ingredients are present, due to concerns about uncontrolled human exposure and legal liabilities.

Regulation of Cannabis-Related Wastes

The solid and hazardous wastes generated by the cannabis industry pose a variety of special

handling or disposal problems. These issues have been addressed in WAC 314-55-097, which requires that wastes from marijuana production and processing must be stored, managed and disposed of in accordance with State and local laws. Wastes must be evaluated according to Chapter 173-303 WAC (the Dangerous Waste Regulations) and handled accordingly if found to be a dangerous waste. If not designated as a dangerous waste, marijuana plants and other wastes must be rendered unusable by grinding and then being mixed with at least 50% other materials. The other materials allowed for this include food waste, yard waste and other organics if the mixture is intended to be composted, and a variety of other materials (paper, plastic, soil, etc.) if the mixture is intended to be disposed in a landfill or incinerator. The mixture can also be handled on-site to the extent allowed by Chapter 173-350 WAC. It is notable that the mixture in either case is defined by WAC 314-55-097 as a solid waste and is no longer classified as a controlled substance (and hence presumably not subject to state or federal regulation as such).

Local growers and processors in Island County are required to submit a waste management plan to Island County Public Health as part of the permit application process.

Existing Management Practices for Cannabis-Related Wastes

Unsold products or products that have been deemed defective at a retail outlet can be manifested and sent back to the producer, which is reportedly what the three retailers in Island County are doing for these products.

At least one local producer of cannabis who receives returned products grinds it and combines it with 50% dirt and applies it on-site. For returned packaging, producers can wash and recycle it or dispose of it as solid waste. The growers of cannabis who generate waste from branches and leaves can grind those materials and then handle it on-site or send it to a commercial composting facility. Local growers generally do not produce any solvents, fluids or additional waste. Currently in Island County, there are only growers but no businesses that employ solvents to process marijuana.

Planning Issues for Cannabis-Related Wastes

On at least one occasion recently, the MRW Facility was asked to handle solvents contaminated with cannabis-related materials and had to turn away this material. Research into the local cannabis industry has concluded that this was possibly a one-time occurrence or at least should not be a significant issue in the future.

The State of Washington has defined non-hazardous cannabis-related wastes to be a solid waste. As a solid waste, there should not be an issue with this material crossing state lines.

Management Alternatives for Cannabis-Related Wastes

No alternatives or recommendations are proposed for cannabis-related wastes at this time.

9.6. CONSTRUCTION AND DEMOLITION WASTES

Construction and demolition (C&D) wastes are addressed in the other chapters of this Plan, but are also addressed in this section to highlight the specific issues and options associated with these wastes. Wastes from construction and demolition activities typically represent a significant portion of the waste stream. Studies conducted in other areas (see Table 2-8) show that 16.5% to 21.6% of the waste stream is wood waste and other construction/demolition wastes. These wastes contain a substantial amount of recyclable materials (wood, cardboard, metals, etc.). Small amounts of C&D waste are usually mixed with regular household and commercial garbage for disposal purposes, but larger quantities are often handled separately because large quantities are generated at specific construction or demolition sites.

Regulation of Construction and Demolition Wastes

In 2010, RCW 70.95.080 was amended to include "when updating a solid waste management plan developed under this chapter, after June 10, 2010, each local comprehensive plan must, at a minimum, consider methods that will be used to address … construction and demolition waste for recycling or reuse."

In Island County, C&D wastes are defined to be solid wastes (per Island County Chapter 8.08B) and are intended to be included in Island County's solid waste system (including flow control provisions).

Existing Management Practices for Construction and Demolition Wastes

Loads of C&D wastes are accepted by the Island County solid waste system but are charged a higher rate than other solid wastes. The higher rate for C&D wastes is due to the potential for these wastes to contain bulky or rigid materials that could cause damage to compactors. Thus it is necessary to handle these wastes separately from municipal solid waste at a higher cost to the customer. These wastes are only accepted at the Camano Transfer Station and ICSWC, and are not accepted at the two dropbox stations (Bayview and North Whidbey).

Reusable construction and demolition materials are being diverted from the solid waste system by Habitat for Humanity stores in Freeland and Oak Harbor. There appears to be a substantial amount of additional construction and demolition materials that could be handled through reuse.

Various facilities in Island County recycle specific types of C&D wastes. These facilities include Concrete Nor'West (accepts concrete, located in Oak Harbor), F-1 Sand and Gravel (concrete and asphalt, Oak Harbor), Krieg Construction (asphalt and rock, Oak Harbor), Lakeside Industries (concrete and asphalt, located in Anacortes but serving Whidbey Island), Lenz Enterprises (concrete, asphalt and wood, Stanwood), Mailliard's Landing Nursery (untreated lumber, Oak Harbor), and Greenbank Concrete and Aggregates (concrete and asphalt, Greenbank). There are no recycling facilities in Island County that handle mixed C&D wastes, and the closest facility for this is Lautenbach Industries near Mount Vernon.

Land clearing debris is sometimes burned where it is generated or handled through on-site grinding and land application. Several local companies operate mobile grinders for on-site grinding, including Mailliard's Landing Nursery and Lenz Enterprises. Open burning of land clearing debris is allowed outside of the designated urban growth areas, subject to a permit from Public Health and other conditions. Some of the other conditions that apply to open burning include that it cannot create a nuisance to neighbors, can only include natural vegetation generated on-site, and cannot include lumber or other construction and demolition wastes.

Land clearing debris is not accepted at Island County solid waste facilities, but can be recycled at various locations in Island County. Vegetative wastes can be taken to Mailliard's Landing Nursery (Oak Harbor) and Lenz Enterprises (in Stanwood but serving Camano Island). Uncontaminated soils can be taken to Concrete Nor'West (Oak Harbor), Ed's Construction (Coupeville), F-1 Sand and Gravel (Oak Harbor), Krieg Construction (Oak Harbor), Mailliard's Landing Nursery (Oak Harbor), Greenbank Concrete and Aggregates (Greenbank), and Lenz Enterprises (Stanwood).

Planning Issues for Construction and Demolition Wastes

Island County has been without a viable market for wood waste since the Kimberly-Clark plant near Everett closed in 2012. Island County staff periodically investigate the possibility of recycling wood waste but to date have not been able to identify a cost-effective alternative. Wood continues to be collected separately at ICSWC in the hopes of finding a market for it in the future, but it is being disposed in the meantime.

As discussed in Chapter 3, there is the potential to divert additional amounts of reusable materials from construction sites.

Construction and Demolition Waste Management Alternatives

In the case of construction and demolition wastes, there are four alternatives that could potentially be pursued in Island County, and three of these are based on programs conducted in nearby jurisdictions.

Miscellaneous Waste Alternative F – Cooperative Arrangement with Private C&D Processing Facility: This alternative is similar to the approach used in Skagit County, where loads of C&D wastes are allowed to be taken to a private facility (Lautenbach Industries) adjacent to the County's main transfer station. Normally it would be necessary for these loads to contain less than 10% non-recyclable materials in order to be classified as a recyclable load and thus be exempt from the Skagit County flow control provisions, but this agreement leads to more recycling. The agreement between Skagit County and Lautenbach Industries requires that the residuals from the processing facility be disposed through the County's waste export system.

Miscellaneous Waste Alternative G – Require Construction Sites to have Recycling Containers: This alternative is loosely modeled after the approach used by Snohomish County, which requires trash containers to be present at construction sites that are using recycling containers. The intent of this approach is to ensure that relatively clean loads of recyclables are being taken

to a recycling facility, while solid wastes remain within the county's disposal system. In Island County's case, the larger need is to encourage the reverse (more recycling).

Miscellaneous Waste Alternative H – Require Construction Sites to Recycle On-Site or Use Certified Facilities: This is the approach being used by the City of Seattle and King County. They require that construction projects either have on-site recycling or send their wastes to a certified processing facility. There are ten facilities in King County and adjoining areas that are currently certified. Certified facilities must submit quarterly reports on the amounts of waste received and recycled, and must be tested to show that their residuals contain less than 10% (by weight) of the seven target recyclable materials. The target recyclable materials are asphalt paving, bricks, concrete, gypsum board (sheetrock), metal and wood that are more than 6" long, and cardboard in excess of 8" long.

Miscellaneous Waste Alternative I – Find a New Market for Wood Waste: Staff could continue to explore possible markets for wood waste. The amount of wood waste that could be diverted from the disposal system is significant. It should be noted that most of the current markets for wood waste in Washington are actually burning the wood for heat and energy, which is not defined as recycling but still represents a beneficial use.

Recommendations for Construction and Demolition Wastes

The following recommendation is being made for construction and demolition wastes (see also Chapter 3, Waste Reduction, Recommendation #WR6):

MW3) Continue to seek a cost-effective market for wood waste.

More details on the implementation of these and other recommendations are shown in Chapter 11.

9.7. 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 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.

Regulation of Petroleum-Contaminated Soils

In March of 1989, a citizen-mandated toxic waste cleanup law went into effect in Washington, changing the manner in which petroleum contaminated sites in this state are cleaned up. Passed by voters as Initiative 97 in the 1988 general election, this law is known as the Model Toxics Control Act (MTCA), Chapter 70.105D RCW. In 1990 and 1991, based on the authority provided in this statute, Ecology published rules describing the legal processes and technical requirements for cleanup of contaminated sites under MTCA. These rules are called the

"Model Toxics Control Act Cleanup Regulations" and were adopted as Chapter 173-340 WAC. Since passage of the initiative, the statute has been amended numerous times by the legislature. The administrative rules have also been updated several times by Ecology. In addition to requirements under MTCA, certain underground storage tank systems containing petroleum (for example, underground storage tanks at gas stations) must also comply with the requirements specified in state Underground Storage Tank laws. These requirements can be found in Chapter 90.76 RCW and Chapter 173-360 WAC.

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 WAC. Air pollution control requirements are based on emission quantities of specific toxic constituents. Piles and most other treatment processes must be permitted by Public Health.

Existing Management Practices for Petroleum-Contaminated Soils

Island County maintains a small treatment site for petroleum-contaminated soils from county facilities only. Petroleum-contaminated soils from other sources are either sent to a treatment plant or to a landfill. Data from Ecology for the most recent year available (2015) shows that 1,541 tons of petroleum-contaminated soils from Island County were disposed at the Roosevelt Regional Landfill and another 1,000 tons were treated and disposed at the Cemex Inert Waste Landfill in Everett.

Planning issues for Petroleum-Contaminated Soils

The amount of petroleum-contaminated soils generated each year is highly variable. The amounts generated in a particular year are dependent on specific projects, since any single project can generate very large amounts of soils. According to Ecology records, in the period of 2010 to 2015 the amount of petroleum-contaminated soils has varied from zero tons (in 2010, 2012 and 2013) to 3,186 tons in 2014.

Management Alternatives for Petroleum-Contaminated Soils

There does not appear to be any significant issues with the current system for handling petroleum-contaminated soils, and so no alternatives or recommendations are being proposed for this waste at this time.

9.8. PHARMACEUTICALS

Waste pharmaceuticals contain toxic chemicals that can affect the environment if they are not properly disposed. Scientists have detected these chemicals in water, sediments, and fish. In a residential home, pharmaceuticals can be a danger to children and pets. It is important to dispose of outdated or unwanted medications properly to prevent accidental use, overdose or abuse by others. Businesses are regulated to ensure they properly manage pharmaceuticals.

Regulation of Pharmaceuticals

State Regulation: Ecology has designated pharmaceuticals into two categories:

- **Viable pharmaceutical**: A pharmaceutical that can still be used for its intended purpose or is returned to a manufacturer, wholesaler, or reverse distributor for credit is defined as viable. Viable pharmaceuticals are not subject to the Dangerous Waste Regulations (Chapter 173-303 WAC) since they are considered to be a product and not a waste.
- **Non-viable pharmaceutical**: A pharmaceutical that can no longer be used for its intended purpose, including but not limited to expired pharmaceuticals, outdated items repackaged at the pharmacy, dropped pills, samples, patient medications left at a hospital, and partial IVs, ampoules, ointments, creams, lotions, and inhalers. Non-viable pharmaceuticals are subject to the Dangerous Waste Regulations.

Pharmaceuticals thrown into the regular garbage can be used inappropriately and/or cause hazardous exposures. Ecology has created an exclusion to make it easier to dispose of pharmaceuticals in a way that minimizes the chance of inappropriate use and risk to the environment (WAC 173-303-071). This exclusion allows waste pharmaceuticals that are dangerous waste only because of Washington State's criteria for toxicity and persistence to be excluded from the rest of the Dangerous Waste Regulations if they are destroyed in an incinerator that meets certain performance standards. A generator may choose to manage pharmaceutical waste under this exclusion and/or the Dangerous Waste Regulations.

Ecology has also developed an "interim enforcement policy" for waste pharmaceuticals to address questions and needs identified by the healthcare industry. Within its enforcement discretion, Ecology will refrain from enforcing portions of the Dangerous Waste Regulations at facilities meeting the conditions of the policy.

Ecology plans to amend specific sections of the Dangerous Waste Regulations to incorporate new federal hazardous waste rules. These changes will impact waste pharmaceuticals. Adopting new rules for waste pharmaceuticals is expected to help healthcare facilities and waste management vendors to better understand the regulations regarding pharmaceutical waste, manage pharmaceutical waste streams properly and reduce regulatory burden.

Local Regulation: Island County has issued guidelines on residential medications disposal that covers proper storage and disposal of medications. These guidelines apply to both Whidbey Island and Camano Island residents.

Pharmaceutical Take-Back Law 2018: A new law, House Bill 1047, was passed in 2018 that requires the safe and convenient collection of pharmaceuticals from households. This law requires the implementation of a drug take-back collection system that must be safe, secure, and convenient on an ongoing, year-round basis and must provide equitable and reasonably convenient access for residents across the state. In establishing and operating collection sites, a preference must be given to locate collection sites at retail pharmacies, hospitals or clinics with on-site pharmacies, and law enforcement agencies. Each population center must have a minimum of one collection site.

House Bill 1047 requires the Washington State Department of Health to adopt rules necessary to implement the drug take-back program. All manufacturers that sell drugs in Washington must participate in a program to collect covered drugs. In August 2018, the State Department of Health released draft rule language for public comment. The purpose of this rule is to:

- Establish a single statewide system of regulation for safe and secure collection and disposal of medicines through a uniform drug take-back program funded by drug manufacturers and regulated by the Department of Health.
- Establish criteria and an approval process for program operators to operate a drug take-back program.
- Ensure that every covered manufacturer whose drugs are sold in Washington must comply with this rule.

The State Department of Health will regulate the collection sites and handle the promotion of this take-back program in Island County.

Existing Management Practices for Pharmaceuticals

Island County is designated a "single source aquifer" and most Island County residents get their drinking water from wells (ground water) and most homes are on septic systems. Residents are asked not to dispose of medications down any sink, toilet or drain to prevent pollution of the ground water or surface waters and the Puget Sound.

The County has written residential guidelines for the proper disposal of both non-prescription (over-the-counter) and prescription medications. The guidelines for prescription drugs advise people to contact local pharmacies or the County Sheriff's Office about take-programs and events. The City of Oak Harbor Police Department accepts prescription medications (in pill form only) for disposal year-round. Pharmacies and law enforcement officials are the only people authorized to accept unused controlled substances. Hospitals and physician offices cannot legally accept unwanted medication.

For non-prescription drugs, people are advised to place non-liquid drugs in a sealable plastic bag or other container with a sealable lid, and then add water or soda to partially dissolve it. Materials such as kitty litter, sawdust, or coffee grounds can then be added to this mixture, and added to drugs that were originally in liquid form, to absorb the fluid and make it less appealing to children and pets. The bag or container can then be sealed and placed in the trash.

Island County offers businesses, including health care facilities, resources and technical assistance to help them comply with applicable laws and protect the environment. Health care facilities must send controlled substances and viable pharmaceuticals to a reverse distributor or manufacturer, or must choose a management option for the remaining pharmaceutical wastes. Businesses can choose from the following options:

- **Option 1**: Assume all pharmaceutical wastes are designated as hazardous wastes under the federal Resource Conservation and Recovery Act (RCRA) and send everything to a RCRA-permitted facility.

- **Option 2**: Determine which pharmaceutical wastes are RCRA-designated hazardous wastes and send those a RCRA-permitted facility. Assume the remainder is state-only dangerous waste and send those to an incinerator under the Conditional Exclusion.
- **Option 3**: Determine which pharmaceutical wastes are RCRA-designated hazardous waste and send those to a RCRA-permitted facility. For pharmaceuticals that are state-only dangerous waste, send those wastes to an incinerator under the Conditional Exclusion. For pharmaceuticals that do not fall into either category, contact the local health department for solid waste disposal options.

Planning issues for Pharmaceuticals

Residential sources are likely the largest source of improperly-disposed pharmaceuticals, but the new take-back program will directly address this problem. When the collection system begins operation (estimated to occur in 2020), Island County residents will have a convenient method to properly dispose of their medications. That system is expected to provide at least one drop-off point for pharmaceuticals in Coupeville, Langley and Oak Harbor and on Camano Island. These opportunities, coupled with increased publicity about the new system, should increase the amount of proper disposal of pharmaceuticals in Island County.

Management Alternatives for Pharmaceuticals

Since the new pharmaceutical take-back program will likely resolve the largest remaining issues with improperly-disposed pharmaceuticals, no additional alternatives or recommendations are being proposed at this time.

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CHAPTER 10

ADMINISTRATION AND PUBLIC EDUCATION

10.1. BACKGROUND FOR ADMINISTRATION AND PUBLIC EDUCATION

Introduction

This chapter of the Solid Waste and Moderate Risk Waste Management Plan ("the Plan") addresses activities and programs undertaken to administer the solid and moderate risk waste system in Island County, including regulatory programs and general public education activities.

Regulations Concerning Administration and Public Education

At the federal and state levels, the primary regulatory authorities for solid waste management are the Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology), respectively. Island County is in the jurisdiction of the northwest regional office of Ecology, located in Bellevue, Washington. At the local level, the responsibility for solid waste administration, enforcement and public education is shared among several departments of Island County and the cities.

Federal Regulations: At the federal level, the Resource Conservation and Recovery Act of 1976 (RCRA), as amended by the Solid Waste Disposal Act Amendments of 1980 (42 U.S.C. 6901-6987), is the primary body of legislation dealing with solid waste. Subtitle D of RCRA deals with non-hazardous solid waste disposal and requires the development of a state solid waste management program that outlines the authorities of local, state and regional agencies. Subtitle D requires that the state program provides that all solid waste is disposed in an environmentally-sound manner. A provision of RCRA requires that federal facilities comply with substantive and procedural regulations of state and local governments, and so military installations and federal agencies must operate in a manner consistent with local solid waste management plans and policies.

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

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

Other relevant State legislation includes Washington's Model Litter Control and Recycling Act (Chapter 70.93 RCW) and associated State regulations (Chapter 173-310 WAC), which generally prohibit the deposit of garbage on any property not properly designated as a disposal site. There is also a "litter fund" that has been created through a tax levied on wholesale and retail businesses, and the monies from this fund are being used for education, increased litter clean-up efforts by the State, and grants to counties for litter and illegal dump clean-up activities. The State conducts litter cleanups on interstate and state highways, while county efforts are focused on local roads.

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

Local Regulations: Regulations for solid and moderate risk wastes have been adopted by Island County and the three cities. The Island County code includes Chapters 8.08B, Solid Waste Handling Regulations, and 13.02A, Solid Waste Disposal. Chapter 8.08B adopts State rules (Chapters 70.95 RCW and 173-350 WAC) and applies those to local conditions. The purpose of Chapter 13.02A is to establish a comprehensive county-wide program for solid waste handling and solid waste recovery and/or reclamation. Both Chapter 8.08B and 13.02A provide clear statements that all waste generated in Island County should be disposed at solid waste facilities within Island County (with exceptions for recycling, dangerous wastes and a few other materials). This is typically called "flow control."

Municipal codes adopted by the Town of Coupeville (Chapter 8.12) and the City of Oak Harbor (Chapter 15.04) address garbage collection requirements and other aspects of the solid waste system. The Town of Coupeville also addresses open burning (Chapter 8.20). The City of Langley has adopted a code (Chapter 13.40) addressing biosolids, composting facilities and green waste collection, and also has a city code addressing litter (Chapter 8.08).

Goals for Administration and Public Education

Two of the goals for this Plan are applicable to this chapter:

- Promote effective waste handling methods with respect to cost and environmental protection.
- Provide customers information and education to promote recommended waste management practices.

10.2. EXISTING ADMINISTRATION AND PUBLIC EDUCATION PROGRAMS

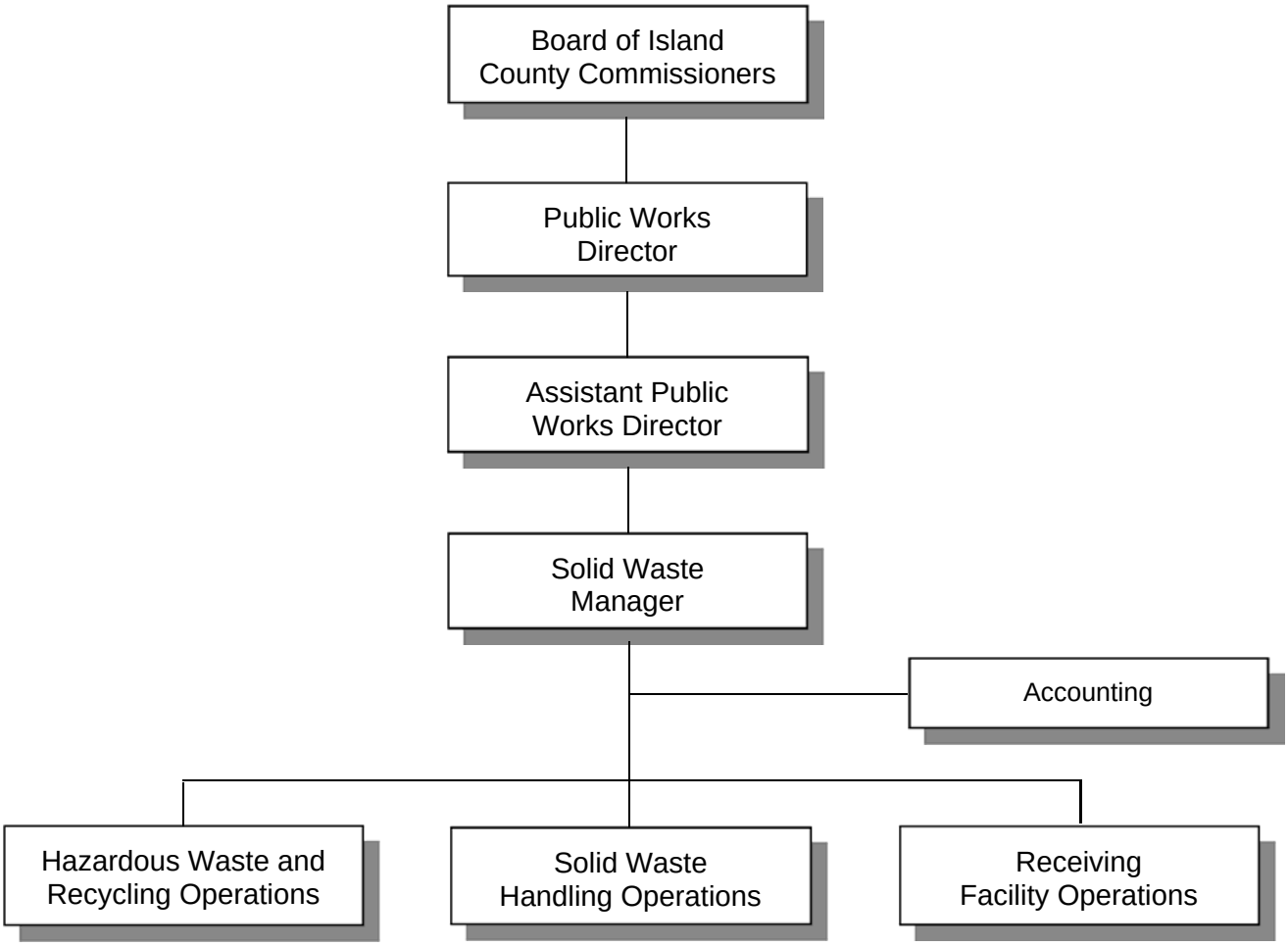
Local agencies involved in solid waste management in Island County include the Island County Public Works Department, Island County Public Health, and various departments of the cities. Each entity has a particular area of operations, providing specific services to the residents

within that area and enforcing specific rules and regulations. In addition, the Solid Waste Advisory Committee plays an important advisory role for the solid waste management system in Island County and the Washington State University (WSU) Extension Waste Wise program provides public education and outreach.

Island County

Island County Solid Waste Division: The Island County Solid Waste Division is a division of the County's Public Works Department. The Solid Waste Division includes elements for accounting, hazardous waste and recycling operations, solid waste handling operations and receiving facility operations as shown in Figure 10-1. Staffing includes dedicated personnel, such as a Solid Waste Division Manager, a Recycling and Hazardous Waste Coordinator, an MRW Facility operator, scalehouse attendants, equipment operators, and assistance as needed from the Public Works Director and other Island County staff.

Figure 10-1
Island County Solid Waste Program Organization



The Solid Waste Division ensures that Island County maintains a viable solid waste and moderate risk disposal system through the operation of several facilities and contracts for waste export and other aspects of the system. The Solid Waste Division is also responsible for various reports to Ecology and other agencies, as well as being responsible for ensuring that the Island County Solid and Moderate Risk Waste Management Plan (this Plan) is periodically updated.

Island County utilizes an enterprise fund for the solid waste management system. The premise of this approach is that expenditures must be matched by revenues from service fees and other appropriate funding mechanisms. Total expenditures by Island County for solid waste activities in 2017 were $7,310,014. The revenues to pay for these expenses came primarily from tipping fees, including septage facility fees, plus proceeds from the sale of recyclables and small amounts of grant and other funds. It is anticipated that this arrangement will continue to be used for the foreseeable future. Table 10-1 shows more detail on actual and anticipated revenues and expenditures for 2016, 2017 and 2018.

Table 10-1. Island County Solid Waste Budget

	2016	2017	2018
Revenues			
Tipping Fees;			
Municipal/Franchise	3,227,421	3,471,225	3,503,844
Private and Individual	2,973,945	3,271,471	2,974,718
Bayview Site	234,100	236,534	215,138
North Whidbey Site	72,024	67,711	68,823
Sewer/Septic Service Fees	521,653	563,743	600,000
Recyclables	29,543	39,492	30,000
HHW/SQG Fees	7,113	5,315	3,000
Ecology Grants	130,692	7,716	50,000
Intergovernmental Service (NASWI)	12,441	14,023	12,000
Water Sales	800	800	800
Miscellaneous	3,447	(7,830)	(700)
Total Revenues	7,213,178	7,670,200	7,457,623
Expenses			
SW Operations (all sites)	5,269,101	5,436,226	4,651,409
Septage Plant Operations	272,668	309,723	228,427
Landfill Closure/Post-Closure	294,897	188,704	168,100
Hazardous Waste Facility	206,184	240,306	249,824
Recycling	733,154	847,082	990,056
SW Capital Expenditures	-	-	620,000
Administration - Interfund	118,607	287,973	549,807
Total Expenses	6,894,611	7,310,014	7,457,623

Notes: All figures are in dollars. The 2016 and 2017 figures are actual amounts, and the 2018 figures are the budgeted amounts.

A rate study is periodically conducted to ensure that revenues continue to match expenses for the solid and moderate risk waste programs. The most recent rate study was conducted in 2017. That rate study concluded that the current disposal rates should be adequate to cover expenses through 2020 or later, although costs and revenues should be monitored closely for that period to ensure that this is the case. That study also concluded that septage rates are set slightly below the level of full cost recovery, but that revenues for solid waste are adequate to cover this shortfall. Revenues for solid waste have been relatively strong in recent years due to larger than expected amounts of solid waste. The waste amounts disposed in Island County have increased by about 7% annually for the past three years (see Table 2-5), compared to an average of about 1% annually for the three-year period before that. This increase is likely due to economic recovery and a return to prior levels of waste generation, and is expected to level out to about 3-4% for the next few years. Together with increasing costs for recycling and other elements of the solid waste system, this should result in approximately the correct level of revenues to cover expenses for the solid waste program overall.

Grant funds are provided by Ecology to support solid and moderate risk waste management programs in Island County, primarily through Local Solid Waste Financial Assistance (LSWFA) grants (what was previously called Coordinated Prevention Grants, or CPG). These funds have been used by Island County to offset part of the costs for the MRW program. Unfortunately, the funding this program has been repeatedly cut in the past few years.

The Solid Waste Division is assisted by the Solid Waste Advisory Committee and by WSU. The Solid Waste Advisory Committee (SWAC) assists with solid waste administration and regulation by serving in an important advisory capacity and by providing a vehicle for public input (see also Section 1.7 and Table 1.2 for more details about the SWAC). The SWAC participates in the development of the solid and moderate risk waste management plan (this Plan), assists in the development of policies and programs for solid waste management, and comments on proposed resolutions and ordinances prior to their adoption. Committee recommendations are provided to the Board of Island County Commissioners.

The WSU Extension Service conducts education programs in Island County for solid waste, recycling and related topics. These efforts are funded by Island County through an agreement between the two agencies. This program, called Waste Wise, conducts public education, manages volunteers, organizes special events and conducts other activities to promote waste diversion and other environmental activities. WSU staff and volunteers promote proper recycling, composting, reducing and reusing, sustainable living, and food waste reduction through presentations, community drives, classes, workshops, digital and printed resources, and more.

Island County Public Health Department: Island County Public Health is responsible for a broad range of activities, including health issues, drinking water quality, food safety, septic systems, birth and death records, and environmental quality issues. Policy guidance for Public Health is provided by the Board of Health, which meets monthly to consider policies to improve the health and safety of Island County residents and visitors, and to address issues presented by Island County Public Health staff.

Island County Public Health administers a permitting process for solid waste handling facilities. The permit process for solid waste facilities requires an application and approval for new sites, and an annual review and renewal for existing permits. The application form requires information about the types of waste to be processed or disposed, environmental conditions of the area and an operations plan that must be approved by Public Health. Permitted facilities are inspected regularly for conformance with solid waste regulations. Public Health collects annual permit fees for solid waste facilities. A list of solid waste handling facility permits valid as of August 2018 is shown in Table 10-2.

Public Health also enforces the Island County Solid Waste Regulations (Chapter 8.08B of the Island County Code), the Washington State Solid Waste Handling Standards (Chapter 173-350 WAC) and other state solid waste laws and 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 if 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.
- 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. A new program was recently started for cleaning up properties that have a lot of garbage or where the property have been illegally dumped on. This is a voucher program where tipping fees are waived for qualifying property owners.

Public Health funds a few positions related to solid waste enforcement using a combination of LSWFA grant monies, permit fees and funds from the Solid Waste Division.

Island County Planning and Community Development Department: The Planning and Community Development Department is involved in solid waste management primarily through permitting and zoning activities. The Planning Department issues land use and building permits, conducts SEPA and/or EIS processes where needed, and reviews critical area checklists. The Long Range Planning Division of this department is the lead agency for maintaining the Island County Comprehensive Plan. The Comprehensive Plan guides land use and establishes policies for public facilities, including solid waste transfer stations. The Comprehensive Plan defines solid waste handling facilities as "any facility for the transfer or ultimate disposal of solid waste, including landfills and municipal incinerators." The Island County Comprehensive Plan was most recently updated on December 13, 2016, and amendments to various elements of this plan are conducted on an annual basis.

Table 10-2. Active Solid Waste Permits Issued by Island County Public Health

Facility	Compost Facility	Material Recovery	Transfer Station or Dropbox	Storage or Treatment Piles	Waste Tire Storage Facility	Moderate Risk Waste Facility	Landfill Post Closure	Surface Impound-ment or Tank	Collection / Transport Vehicle
All Whidbey Topsoil, 5690 Cameron Road, Freeland				Exempt					X
Bayview Drop Box and Recycle Park, 5790 S. Kramer Road, Langley		Exempt	X			Limited & Exempt			
Camano Transfer Station, 75 E. Camano Hill Road, Camano Island		Exempt	X			Limited & Exempt			
Christian's Towing, 615 Christian Road, Oak Harbor		Exempt			X	Limited & Exempt			X
Closed Coupeville Landfill, 20018 SR 20, Coupeville							X		
Coupeville Recycle Park, 20018 SR 20, Coupeville		Exempt				Limited & Exempt			
Coupeville Solid Waste Complex, 20018 SR 20, Coupeville		Exempt	X			Limited & Exempt		X	
F-1 Sand and Gravel, 194 Pit Road, Oak Harbor				Exempt					X
Greenbank Concrete and Aggregates, 27364 State Route 525, Coupeville				Exempt					X
Island County Public Works Storm Debris Piles, 20018 SR 20, Coupeville				Exempt					
Island Disposal, Inc., 19832 SR 20, Coupeville		Exempt							X

Exempt = Activities or quantities fall below the threshold required for permitting.
Current as of August 2018.

Table 10-2. Active Solid Waste Permits Issued by Island County Public Health, continued									
Facility	**Compost Facility**	**Material Recovery**	**Transfer Station or Dropbox**	**Storage or Treatment Piles**	**Waste Tire Storage Facility**	**Moderate Risk Waste Facility**	**Landfill Post Closure**	**Surface Impound-ment or Tank**	**Collection / Transport Vehicle**
Island Recycling, 20014 Washington SR 525, Freeland		Exempt			X	Limited & Exempt			
Krieg Construction, Inc., 70 W. Sleeper Road, Oak Harbor				Exempt					X
Mailliard's Landing Nursery, Inc., 3060 N. Oak Harbor Road, Oak Harbor	X								
NAS Whidbey Compost Facility, 3485 N. Langley Blvd, Bldg. 2555, Oak Harbor	X							X	
NAS Whidbey Recycle, 3485 N. Langley Blvd, Bldg. 2555, Oak Harbor		Exempt							
NAS Whidbey Transfer Station, 3485 N. Langley Blvd, Bldg. 2555, Oak Harbor			X						
North Whidbey Drop Box Station, 3151 Oak Harbor Road, Oak Harbor		Exempt	X			Limited & Exempt			
Oak Harbor Auto Wrecking, 1201 NE 16th Avenue, Oak Harbor		Exempt			X	Limited & Exempt			X
Oak Harbor Municipal Shop, 1400 NE 16th Avenue, Oak Harbor		Exempt			X				
Wildwood Farm, 2326 Happy Valley Rd., Oak Harbor	Exempt								

Exempt = Activities or quantities fall below the threshold required for permitting.
Current as of August 2018.

Solid waste is specifically addressed in the Island County Comprehensive Plan in the chapters dealing with utilities (Chapter 9) and capital facilities (Chapter 10). Relevant goals and policies from the County's land use plan are shown in Table 10-3. In addition, a number of the general goals and policies in the capital facilities chapter apply to solid waste facilities. Solid waste handling facilities are defined as an "essential public facility" in the Comprehensive Plan.

The City of Oak Harbor has also adopted a comprehensive plan (Chapter 18.10 of the Oak Harbor Municipal Code), as has the Town of Coupeville and the City of Langley.

Table 10-3. Goals and Policies from the Island County Comprehensive Plan

Chapter 3, Shoreline Management Element **Policy C.10**	Sanitary landfills and the disposal of solid waste should be prohibited within the shoreline jurisdiction.
Chapter 6, Natural Resources Element **Goal NR 1.3** **Goal NR 1.3.1** **Goal 1.3.1.1**	Conserve energy by encouraging efficient consumption and proper land use management. Government must provide leadership and education in employing energy conservation practices and the use of renewable energy technologies. Recycling of wastes and use of recycled or reused materials will be encouraged.
Goal NR 2.2	Promote non-polluting alternatives to wood burning, such as solar heating and chipping instead of burning slash.

Source: From the Island County Comprehensive Plan.

Island County Department of Emergency Management: The Island County Department of Emergency Management (DEM) is involved in solid waste management primarily through the Island County Comprehensive Emergency Management Plan. The Emergency Management Plan addresses actions to be taken in the event of a disaster or other emergency, including addressing disaster debris management. This plan identifies the responsibilities of the Solid Waste Division, in the event of a disaster, as being "a) coordinate for additional service from contractors and provide increased service from existing facilities following a disaster or emergency to facilitate removal of garbage and debris that may impact the public health, and b) as required, open temporary debris and contaminated material collection points." The proposed actions for disaster debris management are further outlined in Emergency Support Function 3, Public Works and Engineering, which is an element of and an attachment to the Emergency Management Plan. This attachment identifies debris removal from county roads (by the Public Works Department) as a top priority to allow access for emergency personnel and for damage assessment, followed by steps to manage the wastes. Tab A of this attachment specifically addresses debris management, and includes a map of potential temporary staging areas for disaster debris.

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. The three municipalities have designated Island County as the operating authority for the solid waste disposal system.

The City of Oak Harbor manages an extensive website on solid waste and recycling. They also advertise their recycling program by giving out a new customer packet which includes a sign-up sheet and an explanation of their recycling service. Oak Harbor annually sends out a recycling fact sheet and an updated curbside pick-up calendar to existing customers. The City of Langley sends out utility bills with messages every few months and has not yet included solid waste and recycling information. They would consider using these messages for solid waste information in the future. They do send out direct mail regarding water consumer confidence reports to their citizens. The Town of Coupeville sends a utility bill out every other month and that includes solid waste and recycling information.

Regional Agencies

The Northwest Clean Air Agency (NWCAA) conducts public outreach and enforcement in Island County for specific activities that are within their jurisdiction, which generally includes activities that may affect air quality (such as open burning). NWCAA provides public outreach to Island County residents and businesses by:

- Using staff outreach, their website, news releases, interviews, blog posts, social media, group email lists, videos, graphics and public events to promote reduced energy usage in homes, businesses and transportation and to Inform people about outdoor burning and wood heating issues and requirements.
- Publishing a comparison of local air quality with other areas across the nation through participation in American Lung Association Clean Cities Program.

NWCAA conducts enforcement activities for open burning and for regulated facilities largely through permitting, inspections of permitted facilities and responding to complaints.

Private Companies

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

Specific activities conducted by the two private waste haulers in Island County are described below.

Island Disposal: Island Disposal is in the process of expanding the information about solid waste services on their website. They also mail information to new customers and annually send out information about their rates and services to existing customers.

Waste Management: Camano Island residential customers receive an annual brochure that includes guidelines for garbage, recycling, and compost as well as information on disposing of hazardous waste. Resources for businesses and multifamily properties include site visits with recommendations for waste reduction and ways to improve the recycling program. Waste Management gives school recycling presentations and provides technical assistance with recycling programs.

10.3. PLANNING ISSUES FOR ADMINISTRATION AND PUBLIC EDUCATION

This section discusses management issues associated with administration, regulation and public education activities and programs in Island County.

Need to Update County Codes

With the recent adoption of revisions to Chapter 173-350 WAC, the sections of Island County Code that reference this rule will need to be updated as appropriate.

Flow Control Enforcement

Ecology disposal records indicate that a significant amount of construction and demolition (C&D) wastes, or possibly other materials, is being shipped directly to landfills instead of going through the County's solid waste system. In 2015, for instance, there were 885 tons of C&D wastes shipped directly to the Roosevelt Regional Landfill and 123 tons of C&D wastes shipped directly to the Columbia Ridge Landfill.

Complaint Handling by Public Health

Recently, Public Health's ability to record and respond to solid waste-related complaints has been inconsistent due to funding and staffing shortages. Solid waste complaints logged by Public Health in the past three years has varied from 34 in 2015, to 140 in 2016 and to 31 in 2017. The number of complaints in 2015 was reportedly lower due to staff turnover, while the number of complaints in 2017 was lower due to lack of funding.

Public Education Needs

Island County has a good system of public outreach through the agreement with WSU and in cooperation with other agencies. Changes proposed in the recycling system and other issues will, however, require additional outreach to successfully create behavior change.

Regional Opportunities

There may be opportunities for regional efforts involving the neighboring counties (primarily Snohomish and Skagit Counties). Many of these opportunities are in transfer and disposal systems but opportunities may exist for other activities as well.

Solid Waste Rates

A rate study was recently performed to look at the projected costs and expenses of the County's transfer and disposal system through the year 2020. This study concluded that the current rates are adequate for the next few years (until the next scheduled rate study).

10.4. ALTERNATIVES FOR ADMINISTRATION AND PUBLIC EDUCATION

The following alternatives were considered for administration, regulation and public education. The listing of an alternative in this section does not mean that it is considered feasible, nor that it is recommended (see Section 10.5 for the recommendations). In addition, the alternatives are not listed in order of priority.

Alternative A – Update County Codes

Alternative A recognizes that part of the Island County code (especially Chapter 8.08B) is based on Chapter 173-350 WAC, which has now been revised. Updating the county code would keep it consistent with State law.

Alternative B – Continue to Conduct Rate Studies Every 3 to 5 Years

A rate study conducted in 2017 for the period 2018-2020 concluded that the current disposal rates are adequate for the next few years but may not continue to be adequate in 2020 or later. The need to renew the disposal contract in a few years could lead to higher or lower costs. Other factors and events, such as increased transportation and associated costs, may contribute to future changes in the rates. The rates could be examined again in a few years to determine if the rates need to be increased.

Alternative C – Increased Public Education Efforts

Island County has a good system of public education for informing the residents and businesses about existing solid and moderate risk waste programs. Changes in the solid waste system will, however, require a greater effort to both inform people about new programs and to create behavioral changes. An example is the recent changes in the recycling system to stop collecting certain types of plastics. Island County and the WSU Extension Waste Wise Program have addressed this through a press release and placing volunteers at the drop-off containers at county facilities. To implement this change in the curbside programs will require a different strategy and accomplishing this change in the long run will require more extensive efforts in all cases. Furthermore, it will be important that a consistent message be sent out to all residents, whether for drop-off or curbside programs, by the County, cities, and collectors. These needs could be addressed through a subcommittee of the SWAC to communicate about consistent messages and public outreach methods. That subcommittee could include representatives of

the three hauling operations, the WSU Extension Waste Wise Program, Island Recycling and Island County.

Alternative D – More Enforcement of Flow Control

Alternative D recognizes that: 1) Island County has acted on its responsibility to establish a solid waste system that can properly manage and dispose of all of the solid and moderate risk waste from the county; 2) the County has made a substantial investment in this system and that investment is at risk if the system is not fully utilized; 3) the County has codified their intent that all solid wastes must be handled through the County's solid waste system, and 4) it appears that some solid wastes are being taken elsewhere in violation of the County's flow control provisions.

Actions that could be taken to address this situation range from simple reminders sent to waste haulers and recycling facilities, to more extensive enforcement of the County's flow control. More extensive enforcement could include a full- or part-time deputy or code enforcement staff that would investigate waste disposal practices from construction sites and other locations (improper handling of wastes often begins with roll-off container service). A clear system of fines and other enforcement actions will also be needed in this case.

10.5 ADMINISTRATION AND PUBLIC EDUCATION RECOMMENDATIONS

The following recommendations are being made for administration and public education programs:

A&E1) Take appropriate measures to ensure sufficient funding needed to repair, maintain, and replace solid waste infrastructure in order to meet operational needs, regulatory requirements, and public demand for services now and into the future.

A&E2) Take appropriate measures to ensure sufficient funding needed to continue education and outreach.

A&E3) Continue to seek grant funding, as appropriate, to support waste diversion and prevention programs.

A&E4) County codes should be updated for changes in State law, especially Chapter 173-350 WAC.

A&E5) A subcommittee of the SWAC should be created to address changes in the recycling program and possibly other programs where consistent messages are needed.

A&E6) A rate study should be conducted in 2021-2023.

More details on the implementation of these and other recommendations are shown in Chapter 11.

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CHAPTER 11

IMPLEMENTATION CHAPTER

11.1. INTRODUCTION

This chapter lists all of the recommendations from previous chapters and presents a plan to implement the recommendations. These recommendations are intended to guide decision-making activities for Island County for the next six years, while also providing direction for the next 20 years. Implementation of individual program elements will be accomplished through annual budgets, work plans and contracts.

11.2. WASTE REDUCTION RECOMMENDATIONS

The following recommendations are being made for waste reduction programs (see Chapter 3 for more details):

WR1) Continue to promote waste reduction activities such as reuse and smart shopping.
WR2) Continue to encourage safer substitutes for toxic products.
WR3) Conduct public education about how to avoid wasting food.
WR4) Conduct repair cafes.
WR5) Continue to promote clothing reuse.
WR6) Promote reuse of construction materials.
WR7) Discourage single-use plastic products.
WR8) Promote more backyard composting.

11.3. RECYCLING RECOMMENDATIONS

The following recommendations are being made for recycling programs (see Chapter 4 for more details):

R1) All urban areas of Island County should receive curbside recycling service. Curbside recycling services should be implemented in Langley and Freeland when recycling markets improve.
R2) Consider expanding curbside recycling programs to additional rural areas at a later date when market conditions improve.
R3) Continue to make changes in recycling programs based on marketability.
R4) Contamination in recycling programs should be addressed through additional public education that targets specific materials and participants.
R5) Local agencies should use products with recycled content when possible.

11.4. ORGANICS RECOMMENDATIONS

The following recommendations are being made for organics programs (see Chapter 5 for more details):

O1) Investigate the possibility of composting food waste or mixed organics at ICSWC in the future.
O2) Promote the mixed organics collection program on Camano Island.
O3) Conduct more public education for yard waste and mixed organics collection programs to reduce contamination.
O4) Encourage markets for compost where possible.

11.5. SOLID WASTE COLLECTION RECOMMENDATIONS

The following recommendation is being made for solid waste collection programs (see Chapter 6 for more details):

WC1) Continue to promote voluntary subscription to garbage collection services.

11.6. TRANSFER AND DISPOSAL RECOMMENDATIONS

The following recommendations are being made for transfer and disposal programs (see Chapter 7 for more details):

T&D1) The four Island County transfer station and drop box facilities will continue to be the designated disposal system for all solid wastes from Island County.
T&D2) A study should be conducted in 2019 to examine the need for additional capacity at ICSWC.
T&D3) Beginning in 2021, a Request for Proposal (RFP) should be prepared for a new waste export and disposal contract.
T&D4) Continue to examine options to reduce or eliminate ground water monitoring at the old Coupeville landfill.
T&D5) Evaluate future proposals for disposal facilities, anaerobic digestion, incinerators and other waste conversion technologies on a case-by-case basis for consistency with this Plan and according to other criteria appropriate to the proposed system.

11.7. MODERATE RISK WASTE RECOMMENDATIONS

The following recommendations are being made for moderate risk wastes (see Chapter 8 for more details):

MRW1) Support legislation for new product stewardship laws if consistent with Island County programs.
MRW2) Continue collaborative efforts to restore MTCA and LSWFA funding for solid waste and MRW grants and programs.

11.8. MISCELLANEOUS WASTE RECOMMENDATIONS

The following recommendations are being made for miscellaneous wastes (see Chapter 9 for more details):

Recommendation for Biomedical Wastes

MW1) The needle exchange program should be continued.

Recommendation for Biosolids

MW2) Island County should conduct a pilot project for composting biosolids with yard waste.

Recommendation for Construction and Demolition Wastes

MW3) Continue to seek a cost-effective market for wood waste.

11.9. ADMINISTRATION AND PUBLIC EDUCATION RECOMMENDATIONS

The following recommendations are being made for administration, enforcement and public education programs (see Chapter 10 for more details):

A&E1) Take appropriate measures to ensure sufficient funding needed to repair, maintain, and replace solid waste infrastructure in order to meet operational needs, regulatory requirements, and public demand for services now and into the future.

A&E2) Take appropriate measures to ensure sufficient funding needed to continue education and outreach.

A&E3) Continue to seek grant funding, as appropriate, to support waste diversion and prevention programs.

A&E4) County codes should be updated for changes in State law, especially Chapter 173-350 WAC.

A&E5) A subcommittee of the SWAC should be created to address changes in the recycling program and possibly other programs where consistent messages are needed.

A&E6) A rate study should be conducted in 2021-2023.

11.10. IMPLEMENTATION DETAILS

Table 11-1 provides a summary of the proposed recommendations, including responsible parties, schedule, costs, and funding sources. It should be noted that the recommendations have been abbreviated to fit better into this table, and that only new or additional expenses are shown.

Table 11-1. Implementation Summary for Recommendations				
Recommendation	**Lead Agency**	**Priority**	**Schedule**	**Annual Cost**
Waste Reduction				
WR1) Continue to promote activities such as reuse and smart shopping.	SW and WW	High	Ongoing	Existing
WR2) Continue to encourage safer substitutes for toxic products.	SW and WW	High	Ongoing	Existing
WR3) Conduct public education about wasted food.	SW and WW	Medium	2019 and on	$5,000
WR4) Conduct repair cafes.	SW and WW	Low	2020 and on	$6,000
WR5) Continue to promote clothing reuse.	SW and WW	Medium	2019 and on	$3,000
WR6) Promote reuse of construction materials.	SW and WW	High	2019 and on	$5,000
WR7) Discourage single-use plastic products.	SW and WW	Medium	2019 and on	$3,000
WR8) Promote more backyard composting.	SW and WW	Medium	2019 and on	$3,000
Recycling				
R1) Implement curbside recycling in Langley and Freeland in the future.	ID	High	2020 and on	TBD
R2) Consider expanding curbside recycling programs at a later date.	ID	High	2020 and on	TBD
R3) Continue to change recycling programs based on marketability.	SW, haulers, IR	Very high	Ongoing	TBD
R4) Contamination should be addressed through more public education.	Haulers	High	2019 and on	$15,000
R5) Local agencies should use products with recycled content.	County, cities	High	Ongoing	NA
Organics				
O1) Investigate the possibility of composting at ICSWC.	SW	Medium	2020	TBD
O2) Promote the mixed organics program on Camano Island.	WM	High	2019 and on	$10,000
O3) Conduct more public education for collection programs to reduce contamination.	OH, WM, ID	High	2019 and on	$10,000
O4) Encourage markets for compost.	SW	Low	2019 and on	NA
Waste Collection				
WC1) Continue to promote voluntary garbage collection services.	ID, WM, SW	High	Ongoing	Existing
Transfer and Disposal				
T&D1) The four transfer stations and drop box facilities will continue to be the designated disposal system for Island County solid waste.	SW	High	Ongoing	NA

Notes: SW = Island County Solid Waste. WW = WSU Extension Waste Wise Program. Haulers = Island Disposal (ID), Oak Harbor (OH) and Waste Management (WM). IR = Island Recycling. TBD = to be determined. Cities = Coupeville, Langley and Oak Harbor. NA = not applicable.
The level of priority shown for each recommendation was determined by the SWAC on November 16, 2018.
Recommendations have been abbreviated to fit into this table.

Table 11-1. Implementation Summary for Recommendations, continued				
Recommendation	**Lead Agency**	**Priority**	**Schedule**	**Annual Cost**
Transfer and Disposal, continued				
T&D2) A study should be conducted for additional capacity at ICSWC.	SW	Medium	2019 - 2020	$50,000
T&D3) A waste export and disposal RFP should be prepared.	SW	High	Begin 2021	Staff time
T&D4) Continue to examine options to reduce or eliminate ground water monitoring at the old Coupeville landfill.	SW	Low	Ongoing	NA
T&D5) Evaluate future proposals for new technologies on a case-by-case basis.	SW	Medium	Ongoing	NA
Moderate Risk Wastes				
MRW1) Support new product stewardship legislation.	SW	Medium	Ongoing	NA
MRW2) Continue collaborative efforts to restore MTCA and LSWFA funding.	SW	High	Ongoing	NA
Miscellaneous Wastes				
MW1) The needle exchange program should be continued.	PH	High	Ongoing	Existing
MW2) Conduct a pilot project for composting biosolids with yard waste.	SW	High	2019-2020	TBD
MW3) Continue to seek a cost-effective market for wood waste.	SW	Medium	Ongoing	NA
Administration and Public Education Wastes				
A&E1) Ensure sufficient funding needed to repair, maintain, and replace solid waste infrastructure.	SW	High	Ongoing	NA
A&E2) Ensure sufficient funding needed to continue education and outreach.	SW	High	Ongoing	NA
A&E3) Seek grant funding to support waste diversion and prevention programs.	SW	Medium	Ongoing	NA
A&E4) County codes should be updated for changes in State law.	SW, PH	High	2019	NA
A&E5) A subcommittee of the SWAC should be created to address consistent messaging.	SW	Medium	2019	NA
A&E6) A rate study should be conducted in 2021-2023.	SW	High	2021-2023	$30,000

Notes: SW = Island County Solid Waste. NA = Not Applicable. PH = Public Health. TBD = to be determined.
The level of priority shown for each recommendation was determined by the SWAC on November 16, 2018.
Recommendations have been abbreviated to fit into this table.

11.11. FUNDING STRATEGY

The recommended programs will be funded through garbage rates, tipping fees, other user fees and State grants. A summary of the funding sources for the recommended programs is shown in Table 11-2. Specific costs for each recommendation will be further refined through annual budgets and work plans.

As indicated in Table 11-2, garbage rates will be used to fund solid waste collection, curbside recycling and commercial recycling programs. Tipping fees will be the primary source of funds for waste reduction, transfer, disposal, administration, education and some of the recycling programs. Special user fees will fund some of the recycling and miscellaneous waste programs. The Local Solid Waste Financial Assistance (LSWFA) program will be used primarily for the MRW program, with additional funds contributed from tipping fees.

Table 11-2. Funding Strategies for Existing and Recommended Programs

Program or Activity	Garbage Rates	Tipping Fees	Special User Fees	Grants	Other Funding as Available
Waste Reduction		X		X	X
Recycling and Organics	X	X	X	X	X
Solid Waste Collection	X				
Transfer and Disposal		X			
Moderate Risk Wastes		X	X	X	X
Miscellaneous Wastes		X	X	X	X
Administration and Education		X		X	

11.12. SIX-YEAR CONSTRUCTION AND CAPITAL ACQUISITION PLAN

State law (RCW 70.95.110 [1]) requires that solid waste plans include a construction and capital acquisition program for six years into the future. This requirement is generally interpreted to apply only to public facilities, since a solid waste plan cannot dictate construction schedules and capital acquisitions by private companies (except in limited cases pursuant to contracts and other agreements).

No significant construction or capital acquisition expenses are required for this plan, although three recommendations are being made that could lead to significant capital expenditures at a later date. These include Recommendation O1 (investigating the possibility of composting

organics at ICSWC), T&D2 (a study of the need for additional capacity at ICSC) and MW2 (conduct a pilot project for composting biosolids). The capital expenditures associated with these recommendations, if any, will be determined at a later date and may occur outside of the six-year period.

11.13. TWENTY-YEAR IMPLEMENTATION SCHEDULE

It is anticipated that the programs and facilities in Island County will generally be able to stay on the course established by this Plan for the next twenty years. The waste stream for the County is not expected to increase by so much (see Table 2-9) as to create capacity issues for the collection and disposal system. Hence, the twenty-year implementation strategy is much the same as the implementation details shown in this chapter. Changes will continue to occur, however, in the local, statewide and national solid waste arena, and should any of these changes require an amendment or revision to this Plan, then the steps described in the next section can be taken to address those.

11.14. PROCEDURES FOR AMENDING THE PLAN

The Solid Waste Management-Reduction and Recycling Act (Chapter 70.95 RCW) requires local governments to maintain solid waste plans in a "current condition." Plans must be reviewed every five years and revised if necessary. Assuming a timely adoption process for this Plan, with the process completed in 2019, this Plan should be reviewed for necessary updates in 2024.

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," then it should be discussed by the SWAC and a decision made based on a vote of that committee.

At any point in time, however, it may be necessary to update this Plan due to one or more specific changes, and if this should occur then the changes could be either addressed through an amendment or through a revision to the plan, depending on the magnitude of the change(s). An amendment is a simpler process that can be used to keep the Plan current for minor changes. Amendments can be used when there are minor changes in programs, financing or operations, and these changes are still within the original scope and goals of the Plan. For more significant changes, such as a change in the underlying vision of the plan or other changes that impact all or most of the elements of the solid waste system, a plan revision would be needed. Other examples of changes that would require a plan revision include unanticipated changes (changes not addressed in this Plan) such as a change in the disposal method, the development of a new transfer station or disposal facility, and other significant changes in service levels. The process for adopting a revision to the Plan would be similar to the process for creating the Plan in the first place, but amendments can be adopted through a simpler process.

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 should explain why 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 Public Works Department as appropriate.

If the Director of the Public Works Department decides that the petition warrants further consideration, the petition will be referred to the SWAC for review and comment. The Solid Waste Manager will draft the proposed amendment together with the SWAC. This process will also be used if County staff decide to amend the plan. The proposed amendment must be submitted to the legislative bodies of all participating jurisdictions for review and comment. The proposed amendment should also be concurrently reviewed by Ecology and the Washington State Department of Agriculture. As an amendment, an updated Washington State Utilities and Transportation Commission (UTC) Cost Assessment Questionnaire or State Environmental Policy Act (SEPA) Checklist will likely not be required, but the appropriate agencies (the UTC and the Island County Planning Department) should be asked to confirm this. The comments received will be reviewed with the SWAC to solicit their input before submitting the amended plan for local adoption. Adoption of the proposed amendment will require the concurrence of all affected jurisdictions, with a final review and approval by Ecology after that.

The Director of the Public Works Department may develop reasonable rules for submitting and processing proposed plan amendments, and may establish reasonable fees to investigate and process such petitions. All administrative rulings of the Director may be appealed to the Island County Board of Commissioners.

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 is feasible, 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.

GLOSSARY

The following definitions are provided for terms used in this Plan:

Anaerobic digester: a vessel that processes organic material through microbial decomposition under anaerobic (low oxygen) conditions.

Beneficial use: according to (Chapter 173-350 WAC), includes the use of solid waste as an effective substitute for natural or commercial products, or as a soil amendment, in a manner that does not pose a threat to human health or the environment and when approved in accordance with Chapters 173-350-200 or 173-350-230 WAC. The use of solid waste as fill, or avoidance of processing or disposal cost alone, does not constitute beneficial use.

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

Biosolids: includes sludge from the treatment of sewage at a wastewater treatment plant and semisolid waste pumped from a septic system ("septage") that have been treated to meet standards for beneficial use (see Chapter 173-308 WAC for more details).

Brownfield: refers to previously developed and currently abandoned or underutilized properties and adjacent surface waters where usage is hindered by the release or potential release of hazardous substances.

Buy-back recycling center: a facility that pays people for recyclable materials.

Commercial solid waste: solid waste generated by non-industrial businesses. This includes waste from business activities such as construction; transportation, communications and utilities; wholesale trades; retail trades; finance, insurance and real estate; other services; and government.

Commingled: recyclable materials that have been separated from garbage by the generator, but the recyclable materials have been mixed together in the same container.

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

County system: the facilities for solid waste handling owned and operated, or contracted for, by Island County, and all of the related administrative activities.

Curbside recycling: the act of collecting recyclable materials from residential generators, usually after the materials have been placed in a cart at the curb.

Dangerous wastes: solid wastes designated as dangerous by Ecology under the dangerous waste regulations (Chapter 17-303 WAC).

DIY: do-it-yourself.

E-waste: electronic waste. As defined under Chapter 173-900 WAC, e-waste includes computers, monitors, laptops, tablet computers, televisions, portable DVD players and e-readers (these are sometimes collectively referred to as “covered units”).

Enterprise fund: a self-supporting fund designed to pay for expenses using fees for services and other sources of funds appropriate to the activity.

Environmental covenant: deed restrictions limiting certain uses of a property, such as prohibiting the drilling of a water supply well on a property or restricting the use of a property to commercial or industrial uses. The terms "Environmental Covenant", "Institutional Control" and "Restrictive Covenant" have been used synonymously over time.

EPA: the United States Environmental Protection Agency; the federal agency responsible for promulgation and enforcement of federal environmental regulations.

Ferrous metals: materials that are predominantly (over 75% by weight) made of iron. Includes cans and various iron and steel alloys that contain enough iron such that magnets adhere to them, but for recycling this generally does not include paint cans or other containers that may contain hazardous residues.

Flow control: a term that refers to the authority to direct solid wastes to specific facilities.

Grasscycling: leaving grass clippings on the lawn rather than collecting them to provide nutrients and reduce the need for fertilizer.

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

Gypsum: as used for Ecology’s annual recycling report, generally refers to drywall.

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

HHW: household hazardous wastes.

Hog fuel: woody materials that have been ground to a smaller size for use as a fuel, generally at paper mills or other large industrial facilities.

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

Industrial waste: solid waste generated by manufacturing companies. Does not include hazardous wastes generated by these industries.

Interlocal agreement: a formal agreement between two or more public agencies to work cooperatively (see also RCW 70.95.080 and RCW 39.34.030).

LSWFA: Local Solid Waste Financial Assistance, a program administered by the Washington State Department of Ecology to provide financial assistance to counties and others for solid and hazardous waste planning, implementation and enforcement.

Miscellaneous wastes: wastes that have particular characteristics such that they present special handling and/or disposal problems, and so may be handled separately from the Island County waste disposal system.

Mixed organics: used in this Plan to refer to the mix of materials collected by curbside service on Camano Island, including yard waste, food waste and specific types of compostable paper.

Mixed paper: other types of recyclable paper not including newspaper and cardboard. Includes materials such as "junk mail," magazines, books, paperboard (non-corrugated cardboard), and colored printing and writing papers.

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

MRW: moderate risk wastes.

MSW: municipal solid waste.

MTCA: the Model Toxics Control Act.

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

Municipal solid waste (MSW): includes typical garbage and recyclables generated by households, businesses, and institutions. According to State rules (Chapter 173-350 WAC), MSW does not include dangerous wastes (see Chapter 173-303 WAC), contaminated soils and other debris resulting from a cleanup conducted under federal rules, and source-separated recyclable materials.

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

NPDES: National Pollutant Discharge Elimination System.

NWCAA: the Northwest Clean Air Agency; an agency with regulatory and enforcement authority for air pollution issues in Island, San Juan, Skagit and Whatcom Counties.

OFM: the Washington State Office of Financial Management.

Organics: used in this Plan to refer to potentially compostable materials such as yard waste and food waste (see also "mixed organics").

PET: polyethylene terephthalate, a type of plastic. Commonly used to refer to 2-liter beverage bottles, although other containers are also increasingly being made from this material, including containers for liquid and solid materials such as cooking oil, liquor, peanut butter, and many other food and household products.

Post-closure: refers to those actions taken by an owner of a landfill, or the period of time for those actions, after the closure of that landfill and until the landfill is determined to be functionally stable.

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

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

Putrescible: material capable of being readily decomposed by microorganisms and which is likely to produce offensive odors.

Pyrolysis: the process of breaking waste down thermally in the absence of air, producing oil and synthetic gas that can be burned in gas turbines or gas engines to generate electricity.

RCRA: Resource Conservation and Recovery Act.

RCW: Revised Code of Washington.

Recycling: the act of transforming or remanufacturing wastes into usable or marketable materials for use other than landfilling or incineration.

Rendering: the process of converting meat and other animal wastes into usable materials, such as purified fats (lard or tallow), proteins and bone meal.

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

SEPA: State Environmental Policy Act.

Septage: a semi-liquid waste consisting of settled sewage solids combined with varying amounts of water and dissolved materials. Can include wastes removed from septic tanks, cesspools, portable toilets, type III marine sanitation devices, vault toilets, pit toilets, RV holding tanks, or similar systems.

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

Sharps: in this Plan, refers to used needles (syringes) and similar items.

Slash: woody debris generated during logging operations or through wind, snow or other natural forest disturbances.

Small-quantity generator (SQG): a non-residential generator of small quantities of hazardous wastes that is exempt from the full regulations for hazardous wastes as long as the wastes are handled properly.

Solid waste: includes "all putrescible and nonputrescible solid and semisolid wastes, including but not limited to garbage, rubbish, ashes, industrial wastes, swill, construction/demolition debris, junk vehicles or parts thereof, and discarded commodities. This includes all liquid, solid, and semisolid materials which are not the primary products of public, private, industrial, commercial, mining, and agricultural operations. Solid waste includes but is not limited to contaminated soils, contaminated dredged material, recyclable materials, sludge from a wastewater treatment plant, septage from septic tanks, wood waste, dangerous waste, yard debris, bulky waste, and problem wastes" (from Island County Code Chapter 8.08B - Solid Waste Handling Regulations).

Solid Waste Advisory Committee (SWAC): a group assisting Island County with the development of this solid and moderate risk waste management plan, composed of representatives from the general public, private industry, and the cities.

Source-separated: recyclable materials that have been kept separate from garbage or other forms of solid waste by the waste generator. In Island County, this term generally means

keeping different types of recyclable materials separate from each other (see also "commingled").

SQG: Small Quantity Generator.

Sustainable: meeting the needs of the present without compromising the ability of future generations to meet their needs.

SWAC: see Solid Waste Advisory Committee.

Tilth: the physical condition of soil, especially in regards to its suitability for growing plants.

Tipping fee: the rate charged by transfer and disposal facilities, generally on a per-ton basis.

Transfer station: an intermediate solid waste disposal facility at which solid waste is temporarily deposited to await transportation to a final disposal site. Note that the State's definition for a transfer station requires acceptance of waste from garbage collection trucks, which the Bayview and North Whidbey Drop Box Stations do not allow.

UGA: Urban Growth Area, see Island County Comprehensive Plan for more details.

UTC: Washington Utilities and Transportation Commission, which is a State agency responsible for oversight of private utility and transportation services, including electric, natural gas, telecommunications, and water utilities; household movers, solid waste carriers, private ferries, and inter-city busses; and safety issues affecting charter buses, railroads, limousines, and nonprofit senior/handicapped transportation services.

Vermicomposting: the controlled and managed process by which live worms convert organic residues into dark, fertile, granular excrement.

WAC: Washington Administrative Code.

Waste: see solid waste.

Waste diversion: includes waste reduction, recycling and diversion of organics through composting and other means.

Waste reduction: reducing the amount or type of solid waste that is generated. Also defined by state rules to include reducing the toxicity of wastes. Waste reduction is the highest priority waste management approach due to the economic and environmental benefits associated with it.

White goods: term used to refer to large appliances, such as refrigerators, stoves, dishwashers, water heaters and similar consumer products.

WSU Extension Waste Wise Program: a program conducted by Washington State University Extension and supported by Island County Solid Waste. The Waste Wise program conducts public education, manages volunteers, organizes special events and conducts other activities to promote waste diversion and other environmental activities.

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

See also Island County Code 8.08B and WAC 173-350-100 for additional definitions related to solid waste management. In the case of any inconsistencies, Island County Code and State law will take precedence over the above definitions.

APPENDIX A

INTERLOCAL AGREEMENTS

INTRODUCTION

The current interlocal agreements between Island County and the three cities and town are shown in the following pages.

DISCUSSION

These interlocal agreements contain a number of important provisions:

- Makes the county responsible for solid waste disposal.
- The cities and town agree that the county's waste disposal system is the designated disposal system for wastes from their municipalities.
- The cities and town agree to participate in the county solid waste management plan and plan revision process.

The interlocal agreements expire in December 2019 or January 2020, which should be adequate to include the review and approval period for this Plan. This should also provide adequate time for the agreements to be renewed before they expire.

AGREEMENT REGARDING SOLID WASTE MANAGEMENT

Section 1. **AGREEMENT.** This Agreement Regarding Solid Waste Management ("Agreement") is among Island County, Washington ("County") and the cities and towns ("cities") located in the County that determine pursuant to RCW 70.95.080 to contract with the County for solid waste planning and management. The County and cities entering this Agreement are the "Parties." The Parties agree as follows.

Section 2. **RECITALS/PURPOSE.**

2.1 Island County and each of the cities executing this Agreement are authorized and directed by Chapter 70.95 RCW to prepare a Comprehensive Solid and Moderate Risk Waste Management Plan (Comprehensive Plan), and are further authorized by RCW 70.95.080, and other authority including but not limited to RCW 36.58.040 and RCW 35.21.152, to contract for the administration and implementation of a Comprehensive Plan.

2.2 Island County has prepared a Comprehensive 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 Moderate Risk Waste Element and a Recycling element for the county and cities of the County.

2.3 Providing the most effective and efficient management and control of solid waste generated in Island County, including its cities, requires designation and use of the solid waste handling and disposal system established by the County and the County Comprehensive Plan to the fullest extent possible. This Agreement designates and provides for the use of the County System by the cities. The County System will incorporate any mutually approved changes in a city's operation as part of that system, by separate agreement with any such city.

Section 3. **DEFINITIONS**. For the purposes of this Agreement, and unless the context provides otherwise, the following definitions apply.

3.1 "Agreement" means this Agreement Regarding Solid Waste Management.

3.2 "City" means a city or town located in Island County, Washington, that signs this Agreement.

3.3 "Comprehensive Solid and Moderate Risk Waste Management Plan" or "Comprehensive Plan" means the Island County Comprehensive Solid and Moderate Risk Waste Management Plan, including a recycling element, adopted by Island County on September 15, 2014 and as may be revised or amended from time to time thereafter.

3.4 "County" means Island County, Washington.

3.5 "County System" means all facilities for solid waste handling owned or operated, or contracted for, by the County, and all administrative activities related thereto.

3.6 "Person" means an individual, firm, association, partnership, political subdivision, government agency, municipality, industry, public or private corporation or any other entity whatsoever.

3.7 "Solid Waste" means solid waste as defined by RCW 70.95.030(22) and WAC 173-350-100 with the exception of wastes excluded, by WAC 173-350-020 as now in effect or hereafter amended.

3.8 "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 the term "solid waste handling" may be modified by amendments to RCW 70.95.030(23).

Section 4. **RESPONSIBILITY FOR SOLID WASTE DISPOSAL**. For the duration of this 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, consistent with the Comprehensive Plan. The County shall not be responsible for disposal of, and this Agreement does not apply to, Solid Waste that has been eliminated through waste reduction or waste recycling activities in conformity with the Comprehensive Plan.

Section 5. **COMPREHENSIVE PLAN**. For the duration of this Agreement, each city shall participate in the Comprehensive Plan prepared and periodically reviewed and revised every five years pursuant to chapter 70.95 RCW. By this Agreement, each city authorizes the County to include in the Comprehensive Plan provisions for the management and handling of solid waste generated in each City.

Section 6. **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, each city authorizes the County to designate a disposal site or sites for the disposal of all 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 Plan, and (2) those wastes including hazardous or hard-to-handle wastes either prohibited by law or required by the County Solid Waste Department to be specially handled. This designation of the County System shall continue in full force and effect for a period of six (6) years beginning January 1, 2020 except as provided in Agreement Section 12. The designation of the County System in this Agreement shall not reduce or otherwise affect each city's control over Solid Waste collection as permitted or required by applicable state law.

Section 7. **FINANCE AND BUDGETING**.

7.1 The County will prepare and submit to a City or its contract-hauler on a monthly basis an invoice listing the weight in tons of Solid Waste delivered by a City or contract-hauler to the County's Coupeville Transfer Station. The City of Oak Harbor, the Town of Coupeville and the City of Langley will reimburse Island County for processing and disposing of the delivered Solid Waste at the current disposal rate duly adopted by the Board of Island County Commissioners.

7.2 If hazardous or dangerous waste of any origin, as defined in Chapter 173-303 WAC is found to be in a container of solid waste originating in a city (whether from municipal collector or contract-hauler), city will reimburse County the actual cost incurred in disposing of the hazardous waste at a permitted hazardous waste landfill.

7.3 Each party shall be responsible for budgeting and financing its own obligations under this Agreement.

Section 8. **WASTE REDUCTION AND RECYCLING**. The cities and the County hereby agree to cooperate to achieve the priorities for waste reduction and waste recycling set forth in the Comprehensive Plan or subsequent adopted revisions of the Comprehensive Plan.

Section 9. **HAZARDOUS WASTE ELIMINATION**. To extent required by Federal and State law, each 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 transferred or delivered to the County System.

Section 10. **DURATION – EFFECTIVE DATE**. This Agreement shall take effect and be in force following execution by a duly authorized representative of the County and of a city (as to that city) – the "Effective Date." The Agreement shall continue to be in full force and effect for six (6) years beginning January 1, 2020, unless terminated as described in Agreement Section 12.

Section 11. **NO SEPARATE LEGAL AGENCY OR PROPERTY**.

11.1 No separate legal or administrative agency is created by this Agreement. Administration of this Agreement shall be by the County, working through the below-identified city representatives.

County
Island County Solid Waste Manager
P.O. Box 5000
Coupeville, WA 98239-5000

City of Oak Harbor
See Agreement with Oak Harbor

City of Langley
See Agreement with Langley

Town of Coupeville
Public Works Director, Town of Coupeville
4 NE Seventh Street
Coupeville, WA 98239

11.2 Each party will be responsible for acquiring, holding and disposing of property, real and/or personal, to carry out the terms of this Agreement. This Agreement does not provide for or authorize the joint acquisition, holding or disposition of any property.

Section 12. **REVISION, AMENDMENT, SUPPLEMENTATION OR TERMINATION**. This Agreement shall be reviewed by the parties every 5 years. At that time the terms of the Agreement may be revised, amended or supplemented upon written agreement of participating 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 with the revision of the Comprehensive Plan as described in Agreement Section 5.

Section 13. **MISCELLANEOUS.**

13.1 No waiver by any 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.

13.2 No other person or entity shall be entitled to be treated as third party beneficiary of this Agreement.

13.3 Passage of this Agreement replaces, rescinds and supersedes any prior contract or agreement between any of the contracting parties dealing with or relation to solid waste handling in Island County.

13.4 This Agreement shall be construed pursuant to the laws of the State of Washington. The venue for any dispute arising out of or relating to this Agreement shall be the Superior Court of the State of Washington for Island County.

13.5 No provision of provisions of this Agreement or any authority granted by this Agreement is intended to create or result in any personal liability for any public official or employee or agent of the County or a city, nor shall any provision or provisions of this Agreement be construed to create any such liability.

13.6 This Agreement has been freely and fairly negotiated by the Parties hereto and has been reviewed and discussed by legal counsel for each of the Parties, each of whom has had the full opportunity to modify the draftsmanship hereof and, therefore, the terms of this Agreement shall be construed and interpreted without any presumption or other rule requiring constructional interpretation against the Party causing the drafting of the Agreement.

13.7 This Agreement contains the complete statement of the understanding of the Parties with respect to the subject matter of this Agreement. There are no other representations, agreements, or understandings, oral or written, by the Parties relating to the subject matter of this Agreement that are not fully expressed in this Agreement. Each Party acknowledges and represents to the other Party that it is executing this Agreement solely in reliance upon its own judgment and knowledge and that it is not executing this Agreement based upon the representation or covenant of the other Party, or anyone acting on such Party's behalf, except as expressly stated herein.

13.8 Indemnification: Each party agrees to be responsible and assume liability for its own wrongful and/or negligent acts or omissions or those of their officials, officers, agents or employees to the fullest extent required by law, and further agrees to save, indemnify, defend and hold the other party harmless from any such liability.

[Remainder of this page blank. Signature page follows.]

AGREEMENT REGARDING SOLID WASTE MANAGEMENT

Board of Island County Commissioners

Jill Johnson, Chair

Date: 10/10/19

Town of Coupeville

Molly Hughes, Mayor

Date: 10/24/2019

See Agreement with City of Langley

See Agreement with City of Oak Harbor

AGREEMENT REGARDING SOLID WASTE MANAGEMENT

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Section 2. **RECITALS/PURPOSE.**

2.1 Island County and each of the cities executing this Agreement are authorized and directed by Chapter 70.95 RCW to prepare a Comprehensive Solid and Moderate Risk Waste Management Plan (Comprehensive Plan), and are further authorized by RCW 70.95.080, and other authority including but not limited to RCW 36.58.040 and RCW 35.21.152, to contract for the administration and implementation of a Comprehensive Plan.

2.2 Island County has prepared a Comprehensive 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 Moderate Risk Waste Element and a Recycling element for the county and cities of the County.

2.3 Providing the most effective and efficient management and control of solid waste generated in Island County, including its cities, requires designation and use of the solid waste handling and disposal system established by the County and the County Comprehensive Plan to the fullest extent possible. This Agreement designates and provides for the use of the County System by the cities. The County System will incorporate any mutually approved changes in a city's operation as part of that system, by separate agreement with any such city.

Section 3. **DEFINITIONS.** For the purposes of this Agreement, and unless the context provides otherwise, the following definitions apply.

3.1 "Agreement" means this Agreement Regarding Solid Waste Management.

3.2 "City" means a city or town located in Island County, Washington, that signs this Agreement.

3.3 "Comprehensive Solid and Moderate Risk Waste Management Plan" or "Comprehensive Plan" means the Island County Comprehensive Solid and Moderate Risk Waste Management Plan, including a recycling element, adopted by Island County on September 15, 2014 and as may be revised or amended from time to time thereafter.

3.4 "County" means Island County, Washington.

3.5 "County System" means all facilities for solid waste handling owned or operated, or contracted for, by the County, and all administrative activities related thereto.

3.6 "Person" means an individual, firm, association, partnership, political subdivision, government agency, municipality, industry, public or private corporation or any other entity whatsoever.

3.7 "Solid Waste" means solid waste as defined by RCW 70.95.030(22) and WAC 173-350-100 with the exception of wastes excluded, by WAC 173-350-020 as now in effect or hereafter amended.

3.8 "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 the term "solid waste handling" may be modified by amendments to RCW 70.95.030(23).

Section 4. **RESPONSIBILITY FOR SOLID WASTE DISPOSAL.** For the duration of this 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, consistent with the Comprehensive Plan. The County shall not be responsible for disposal of, and this Agreement does not apply to, Solid Waste that has been eliminated through waste reduction or waste recycling activities in conformity with the Comprehensive Plan.

Section 5. **COMPREHENSIVE PLAN.** For the duration of this Agreement, each city shall participate in the Comprehensive Plan prepared and periodically reviewed and revised every five years pursuant to chapter 70.95 RCW. By this Agreement, each city authorizes the County to include in the Comprehensive Plan provisions for the management and handling of solid waste generated in each City.

Section 6. **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, each city authorizes the County to designate a disposal site or sites for the disposal of all 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 Plan, and (2) those wastes including hazardous or hard-to-handle wastes either prohibited by law or required by the County Solid Waste Department to be specially handled. This designation of the County System shall continue in full force and effect for a period of six (6) years beginning January 1, 2020 except as provided in Agreement Section 12. The designation of the County System in this Agreement shall not reduce or otherwise affect each city's control over Solid Waste collection as permitted or required by applicable state law.

Section 7. **FINANCE AND BUDGETING.**

7.1 The County will prepare and submit to a City or its contract-hauler on a monthly basis an invoice listing the weight in tons of Solid Waste delivered by a City or contract-hauler to the County's Coupeville Transfer Station. The City of Oak Harbor, the Town of Coupeville and the City of Langley will reimburse Island County for processing and disposing of the delivered Solid Waste at the current disposal rate duly adopted by the Board of Island County Commissioners.

7.2 If hazardous or dangerous waste of any origin, as defined in Chapter 173-303 WAC is found to be in a container of solid waste originating in a city (whether from municipal collector or contract-hauler), city will reimburse County the actual cost incurred in disposing of the hazardous waste at a permitted hazardous waste landfill.

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Coupeville, WA 98239-5000

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See Agreement with Oak Harbor

Town of Coupeville
See Agreement with Coupeville

City of Langley
Director of Public Works
P.O. Box 366
Langley, WA 98260

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[Remainder of this page blank. Signature page follows.]

AGREEMENT REGARDING SOLID WASTE MANAGEMENT

Board of Island County Commissioners

Jill Johnson, Chair

Date: 1/7/10/19

City of Langley

Tim Callison, Mayor

Date: 6/17/2019

See Agreement with Town of Coupeville

See Agreement with City of Oak Harbor

AGREEMENT REGARDING SOLID WASTE MANAGEMENT

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Island County Solid Waste Manager
P.O. Box 5000
Coupeville, WA 98239-5000

City of Langley
See Agreement with Langley

Town of Coupeville
See Agreement with Coupeville

City of Oak Harbor
Director of Operations, City of Oak Harbor Public Works
865 SE Barrington Drive
Oak Harbor, WA 98277

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[Remainder of this page blank. Signature page follows.]

AGREEMENT REGARDING SOLID WASTE MANAGEMENT

Board of Island County Commissioners

Jill Johnson, Chair

Date: 12/10/19

City of Oak Harbor

Robert Severns, Mayor

Date: 1-11-19

See Agreement with Town of Coupeville

See Agreement with City of Langley

APPENDIX B

DISPOSAL FACILITY SITING FACTORS

INTRODUCTION

This Solid Waste and Moderate Risk Waste Management Plan (this Plan) is required to contain the following information to provide guidance for siting new solid waste disposal facilities (per RCW 70.95.090 (9) and RCW 70.95.165). This requirement refers specifically to disposal facilities (landfills and incinerators). It should be noted, however, that one of the State standards for solid waste disposal facilities prohibits the siting of those facilities over federally-designated sole source aquifers. The aquifers below both Whidbey Island and Camano Island have been designated as sole source aquifers under the Federal Safe Drinking Water Act (Public Law 93-523). Hence, no new or expanded MSW landfills, limited purpose landfills or other solid waste disposal facilities can be sited in Island County.

DESCRIPTION OF THE PLANNING AREA

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, 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.

Geology

Island County lies within the Puget Sound lowland between the Cascade Range to the east and the Olympic Mountains to the west. The islands are generally composed of unconsolidated Pleistocene glacial and interglacial deposits that overlie Tertiary and older bedrock. There is a large difference in the physical characteristics of the glacial deposits 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.

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 (NASWI). 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).

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.

Surface Water and Flooding

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.

Topography and Slopes

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.

Cover Materials

Cover and liner materials are important because their presence on-site at landfills and other disposal facilities will reduce the cost of construction, operation and maintenance. Cover materials are required to ensure that waste materials are securely buried and to prevent gas and odors from being released in an uncontrolled fashion, while liners are needed below the landfill to contain the leachate that is created by the wastes in the landfill. Silt and clay can be used for liners and cover, while coarser materials (sand and gravel) can be used for gas venting, leachate collection and road construction. A variety of materials can be used for intermediate cover. In the absence of naturally-occurring materials, however, synthetic materials can be used instead.

Capacity

The intended capacity of a waste disposal facility will affect the number of potential locations that can be used for it. It is generally easier to find an acceptable parcel of land for smaller facilities. Conversely, there are significant economies of scale for all waste disposal facilities, and the base cost per ton for waste brought to a small facility will be much higher than for a larger facility.

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.

Land Use

The Island County Comprehensive Plan and the related codes and land use decisions are the tools for designation of land use in Island County. The cities and town also have land use plans, zoning codes and other policies and regulations that may affect land use and development. Other special considerations may apply to specific sites and/or specific types of facilities. For instance, the Federal Aviation Administration has stipulated that landfills cannot be located within 6 miles of an airport unless a waiver is obtained. Because birds that are attracted to landfills pose a hazard to aircraft, the granting of this waiver is dependent upon the magnitude of the anticipated bird population. Areas designated as critical habitat by responsible agencies (i.e., the U.S. Fish and Wildlife Service and Washington State Department of Wildlife) are considered regulatory exclusions for landfill siting. Information concerning such areas is available from the appropriate State and Federal wildlife management agencies.

Toxic Air Emissions

Siting and operating a new landfill or other solid waste facility could impact air quality. Dust, gases, odors, particulates and vehicle emissions are all potentially increased by landfills and other disposal operations. In certain cases, however, the centralization of such emissions may be preferable to the impacts caused by other options. Any proposal would need to be examined for the net impact on air quality.

The county's air quality is generally good due to climate, physiography, and the limited number of particulate producing activities.

Summary of Siting Factors

Based on the above discussion of siting factors, it can be concluded that no part of Island County is available for siting a new solid waste disposal facility such as a landfill or incinerator. A more detailed analysis of siting factors is not being provided at this time due to the impossibility of siting such a disposal facility in Island County.

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APPENDIX C

UTC COST ASSESSMENT QUESTIONNAIRE

INTRODUCTION

The purpose of the information shown in this appendix is to allow an assessment of the impact of proposed activities on current and future garbage collection and disposal rates. By State law (RCW 70.95.090), solid waste management plans are required to include:

> "an assessment of the plan's impact on the costs of solid waste collection. The assessment shall be prepared in conformance with guidelines established by the Utilities and Transportation Commission. The Commission shall cooperate with the Washington state association of counties and the association of Washington cities in establishing such guidelines."

The following cost assessment questionnaire has been prepared in accordance with the guidelines provided by the Utilities and Transportation Commission (UTC 2001). The UTC needs this information to review the Plan's impacts to the certificated waste haulers that it regulates, of which there are two in Island County (Waste Connections and Waste Management). For these haulers, the UTC is responsible for setting collection rates and approving proposed rate changes. Hence, the UTC will review the following cost assessment, and then advise Island County as to the probable collection rate impacts of proposed programs. Consistent with this purpose, the cost assessment focuses primarily on those programs (implemented or recommended) with potential rate impacts.

SUMMARY

Island County has developed a well-managed solid waste system, and so in many cases this Plan recommends continuing existing programs that do not create significant new or additional costs. However, some recommendations are made for expanded waste reduction and recycling programs, which could create additional costs.

COST ASSESSMENT QUESTIONNAIRE

PLAN PREPARED FOR THE COUNTY OF: Island

PREPARED BY: Rick Hlavka, Green Solutions

CONTACT TELEPHONE: (360) 897-9533 DATE: June 3, 2019

DEFINITIONS

Throughout this document:
YR.l shall refer to 2020
YR.3 shall refer to 2022
YR.6 shall refer to 2025

Year refers to: **Calendar Year** (Jan 1 - Dec 31)

1. **DEMOGRAPHICS**: To assess the generation, recycling and disposal rates of an area, it is necessary to have population data.

1.1 Population

1.1.1 What is the total population of your County?

Year 1	Year 3	Year 6
84,044	85,345	87,297

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
84,044	85,345	87,297

1.2 References and Assumptions

See Table 2-2.

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.

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
24,121	24,494	25,054

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
45,678	46,385	47,446

2.3 References and Assumptions

See Table 2-9.

3 **SYSTEM COMPONENT COSTS**: This section asks questions specifically related to the types of programs currently in use and those recommended to be started.

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 Plan please provide the page number.

Implemented	Proposed
See pages 5-1 and 5-2	Continue to promote reuse and smart shopping, encourage safer substitutes for toxic products, and clothing reuse
	Conduct education for avoiding wasting food
	Promote reuse of construction materials
	Conduct repair cafes
	Discourage single-use plastic products
	Promote more backyard composting

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
$80,000	$80,000	$80,000
Proposed		
Year 1	Year 3	Year 6
$25,000	$25,000	$25,000

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
Tipping Fees, Grants, Other Funds as Available	Tipping Fees, Grants, Other Funds as Available	Tipping Fees, Grants, Other Funds as Available
Proposed		
Year 1	Year 3	Year 6
Tipping Fees, Grants, Other Funds as Available	Tipping Fees, Grants, Other Funds as Available	Tipping Fees, Grants, Other Funds as Available

3.2 Recycling Programs

3.2.1 Please list the proposed or implemented recycling programs their costs, and proposed funding mechanism or provide the page number in the draft plan on which it is discussed.

Implemented		
Program	**Cost**	**Funding**
Drop-Off Stations	$472,000	Tipping Fees
Curbside Recycling	Not Available	Municipal and Private Garbage Rates
Proposed		
Program	**Cost**	**Funding**
Additional Curbside Recycling	Unknown	Service Fees and Materials Sales
Additional Public Education to Reduce Contamination	$15,000	Service Fees

3.3 Solid Waste Collection Programs

3.3.1 Regulated Solid Waste Collection Programs

UTC Regulated Hauler Name	Island Disposal, Inc.		
G-Permit #154			
	Year 1	**Year 3**	**Year 6**
Residential Customers			
# of Customers	10,587	10,778	11,072
Tonnage Collected	9,007	9,170	9,420
Commercial Customers			
# of Customers	1,190	1,212	1,245
Tonnage Collected	1,013	1,031	1,059
Dropbox Customers			
# of Customers	86	88	90
Tonnage Collected	3,336	3,397	3,489

UTC Regulated Hauler Name	Waste Management		
G-Permit #237			
	Year 1	**Year 3**	**Year 6**
Residential Customers			
# of Customers	4,945	5,034	5,171
Tonnage Collected	3,416	3,477	3,572
Commercial Customers			
# of Customers	92	93	96
Tonnage Collected	495	504	518
Dropbox Customers			
# of Customers	6	6	6
Tonnage Collected	32	32	33

3.3.2 Other (non-regulated) Solid Waste Collection Programs

Hauler Name	City of Oak Harbor		
	Year 1	**Year 3**	**Year 6**
Residential Customers			
# of Customers	5,175	5,268	5,412
Tonnage Collected	3,926	3,997	4,106
Commercial Customers			
# of Customers	528	538	553
Tonnage Collected	5,004	5,094	5,233

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
$550,000	$550,000	$550,000
Funding Source		
Year 1	Year 3	Year 6
Tipping Fees and Grants	Tipping Fees and Grants	Tipping Fees and Grants

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 and grants if available.

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
$250,000	$250,000	$250,000

3.7.5 Please describe the funding mechanism(s) that will recover the cost of this component.

Tipping fees, grants (especially the Local Solid Waste Financial Assistance grants), user fees and other funds as available.

3.8 References and Assumptions

For Section 3.3, figures for the number of customers and tonnages were provided by the service-providers for 2017 or 2018, and then escalated by 0.9% annually (the anticipated population growth).

Costs shown in Sections 3.1, 3.2, 3.6 and 3.7 are current figures and have not been inflated for future years because the future 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 (2017)	Total Revenue Generated
Island County Solid Waste Complex	Transfer Station	See Table 7-1	NA	Near Coupeville	Roosevelt Regional Landfill	42,088	$5,454,841
Camano Transfer Station	Transfer Station	See Table 7-1	NA	Camano Island	Roosevelt Regional Landfill	9,889	$1,287,855
Oak Harbor Drop Box Station	Drop Box	See Table 7-1	NA	Near Oak Harbor	Roosevelt Regional Landfill	267	$67,111
Bayview Drop Box Station	Drop Box	See Table 7-1	NA	Near Bayview	Roosevelt Regional Landfill	793	$236,534

Table 4.1.2 Tip Fee Components

Tip Fee by Facility	Sur-charge	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
Camano Transfer Station	NA	NA	NA	NA	NA	NA	NA
Oak Harbor Drop Box Station	NA	NA	NA	NA	NA	NA	NA
Bayview Drop Box Station	NA	NA	NA	NA	NA	NA	NA
All Facilities	0	0	3.6%	See operational cost	80.7%	12.8%	2.9%

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							100%			
Moderate-Risk Waste					LSWFA	$50,000	80%			

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	$115.00	$115.00	$119.60	$119.60	$119.60	$119.60
Camano Transfer Station	$115.00	$115.00	$119.60	$119.60	$119.60	$119.60
Oak Harbor Drop Box Station	$115.00	$115.00	$119.60	$119.60	$119.60	$119.60
Bayview Drop Box Station	$115.00	$115.00	$119.60	$119.60	$119.60	$119.60

Note: The tip fee shown in the above table is for mixed solid waste delivered by municipal and franchise haulers only (see Table 7-1 for fees currently charged for other types of customers and other types of wastes). Fees for Years One and Two have been established by county ordinance. Fees for Years Three through Six have not been determined yet, and will likely be determined through a rate study anticipated to be conducted in 2021-2022. For present planning purposes, the projected fees shown in Table 4.1.4 for Years Three through Six assume a 4% increase over the previous rate-setting period.

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. 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**	**Collec-tion Tax**	**Rates, Service Fees**	**Other**	**Total**
Waste Reduction	100						100
Recycling	25				75		100
Collection					100		100
ER&I							NA
Transfer	100						100
Land Disposal	100						100
Administration	100						100
Other							NA
Moderate Risk Waste	80	20					100
Regulation	100						100

4.2.2 Year Three

Funding Mechanism (in percent)							
Component	**Tip Fee**	**Grant**	**Bond**	**Collec-tion Tax**	**Rates, Service Fees**	**Other**	**Total**
Waste Reduction	100						100
Recycling	25				75		100
Collection					100		100
ER&I	100						NA
Transfer	100						100
Land Disposal	100						100
Administration	100						100
Other							NA
Moderate Risk Waste	50	50					100
Regulation	100						100

4.2.3 Year Six

Funding Mechanism (in percent)							
Component	**Tip Fee**	**Grant**	**Bond**	**Collec-tion Tax**	**Rates, Service Fees**	**Other**	**Total**
Waste Reduction	100						100
Recycling	25				75		100
Collection					100		100
ER&I	100						NA
Transfer	100						100
Land Disposal	100						100
Administration	100						100
Other							NA
Moderate Risk Waste	50	50					100
Regulation	100						100

4.3 References and Assumptions

NA

4.4 Surplus Funds

NA

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APPENDIX D

SEPA CHECKLIST

INTRODUCTION

This appendix contains the environmental checklist required by the State Environmental Policy Act (SEPA). The purpose of the checklist is to provide information on the environmental impacts of the activities proposed by this Solid Waste and Moderate Risk Waste Management Plan (this "Plan"). Much of this checklist addresses only the general concerns related to the County's solid waste system, but specific actions proposed by this Plan are addressed as appropriate. One or more of the activities discussed in the Plan may require separate SEPA processes in the future when implementation plans for those activities are more fully developed.

ENVIRONMENTAL CHECKLIST

A. BACKGROUND

1. Name of proposed project, if applicable:

   Island County Solid Waste and Moderate Risk Waste Management Plan ("Plan")

2. Name of applicant:

   Island County

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

   Project Manager:
   Joantha Guthrie, MPA
   Solid Waste Division Manager
   P.O. Box 5000
   Coupeville, WA 98239
   360-679-7338 / Fax 360-678-7848

   Consultant:
   Rick Hlavka
   Green Solutions
   PO Box 680
   South Prairie, WA 98385
   (360) 897-9533

4. Date checklist prepared:

   June 3, 2019

5. Agency requesting checklist:

   Washington State Department of Ecology. State law regarding solid waste management plans require a SEPA checklist.

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

   The Plan recommends various solid waste management programs to be continued or developed over the next six years.

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

   Yes. State law requires solid waste management plans to be reviewed every five years, and updated if necessary.

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

   NA

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

   No.

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

In order to participate in this Plan, each local jurisdiction will need to approve and adopt the Plan. These jurisdictions include Island County, the Cities of Langley and Oak Harbor and the Town of Coupeville. In addition, the Department of Ecology, the Utilities and Transportation Commission, and the Department of Agriculture must review and/or approve the Plan.

Building and other permits may be necessary to implement a few of the recommendations being made by this Plan, but these permits (and an environmental review process for those, if necessary) will be sought through separate processes at a later date.

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

This Solid Waste and Moderate Risk Waste Management Plan (Plan) is a twenty-year plan for the unincorporated and incorporated areas of Island County. This Plan discusses all aspects of solid waste management within the County and incorporated areas, including waste reduction, recycling, composting, energy recovery, collection, transfer, import/export, waste disposal, and regulation and administration. Specific recommendations are made for all of these elements, but in most cases these recommendations represent program or policy refinements that have no significant environmental impacts.

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.

The activities proposed by this Plan will generally take place throughout Island County, although a few of the recommendations are for specific areas or sites, and excluding Naval Air Station Whidbey Island.

TO BE COMPLETED BY APPLICANT

EVALUATION FOR AGENCY USE ONLY

B. ENVIRONMENTAL ELEMENTS

1. EARTH

a. General description of the site (circle one):
Flat, rolling, hilly, steep slopes, mountainous, other __.

Does not apply, there is no specific site being addressed by this plan.

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

Does not apply, there is no specific site being addressed by this plan.

b. 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, there is no specific site being addressed by this plan.

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

Does not apply, there is no specific site being addressed by this plan.

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

Does not apply, there is no specific site being addressed by this plan.

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

Does not apply, there is no specific site being addressed by this plan.

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

Does not apply, there is no specific site being addressed by this plan.

EVALUATION FOR
AGENCY USE ONLY

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

Does not apply, there is no specific site being addressed by this Plan.

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.

No significant amounts of emissions are anticipated as a result of any of the recommendations made by the Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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

No significant amounts of emissions are anticipated as a result of any of the recommendations made by the Plan.

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, there is no specific site being addressed by this Plan.

EVALUATION FOR
AGENCY USE ONLY

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

Does not apply, there is no specific site being addressed by this Plan.

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, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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, there is no specific site being addressed by this Plan.

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, there is no specific site being addressed by this Plan.

EVALUATION FOR
AGENCY USE ONLY

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, there is no specific site being addressed by this Plan.

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, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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 grain

EVALUATION FOR
AGENCY USE ONLY

__ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
__ water plants: water lily eelgrass, milfoil, other
__ other types of vegetation

All of these types of vegetation can be found in Island County.

b. What kind and amount of vegetation will be removed or altered?
Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

5. ANIMALS

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

Birds: hawk, heron, eagle, songbirds, other
Mammals: deer, bear, elk, beaver, other
Fish: bass, salmon, trout, herring, shellfish, other

All of these types of animals can be found in Island County.

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

EVALUATION FOR
AGENCY USE ONLY

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

Does not apply, there is no specific site being addressed by this Plan.

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.

Several of the activities recommended in the Plan will require small additional amounts of electrical power to support normal, everyday activities.

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

Does not apply, there is no specific site being addressed by this Plan.

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, there is no specific site being addressed by this Plan.

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.

No, although the Plan encourages continuing moderate risk waste collections, which should help prevent this type of problem in the future.

1) Describe special emergency services that might be required.

The MRW Facility and satellite facilities already have established procedures for incident response.

EVALUATION FOR
AGENCY USE ONLY

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, there is no specific site being addressed by this Plan.

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, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

8. LAND AND SHORELINE USE

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

c. Describe any structures on the site.

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

EVALUATION FOR
AGENCY USE ONLY

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

EVALUATION FOR
AGENCY USE ONLY

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, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

EVALUATION FOR
AGENCY USE ONLY

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

12. RECREATION

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

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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, there is no specific site being addressed by this Plan.

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, there is no specific site being addressed by this Plan.

EVALUATION FOR
AGENCY USE ONLY

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, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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, there is no specific site being addressed by this Plan.

b. Is site currently served by public transit? If no, what is the approximate distance to the nearest transit stop?

Does not apply, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

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, there is no specific site being addressed by this Plan.

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

Does not apply, there is no specific site being addressed by this Plan.

EVALUATION FOR
AGENCY USE ONLY

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

Implementing the Plan may cause slight increase in vehicular traffic, and future increases in waste tonnages will increase truck transportation requirements (for waste export containers and garbage collection vehicles).

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

Does not apply, there is no specific site being addressed by this Plan.

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, there is no specific site being addressed by this Plan.

16. UTILITIES

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

Does not apply, there is no specific site being addressed by this Plan.

C. SIGNATURE

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

Signature: Joantha Guthrie

Date Submitted: 8/23/2019

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

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?

   By providing for secure disposal of solid wastes and increased recycling activities, the Plan is expected to decrease impacts and discharges to water and air, and to provide for more secure handling of toxic or hazardous substances that may be part of the solid waste stream. No substantial increases or decreases in noise levels are expected as a result of the Plan's recommendations.

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

   No significant impacts to plant, animal, fish, or marine life are expected.

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

   Does not apply.

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

   A small amount of energy and materials will be needed to implement the recommendations in the Plan, but this is expected to be more than offset by the energy and resources conserved as the result of increased waste prevention, recycling and composting recommended by the plan.

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

   Does not apply.

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

   No substantial impacts, either positive or negative, to environmentally sensitive or other protected areas are expected to result from the recommendations in the Plan.

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

   Does not apply.

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

   No substantial impacts, either positive or negative, to land and shoreline use are expected to result from the recommendations in the Plan.

   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?

   Minor changes are proposed for public services and to several aspects of the waste collection system.

   Proposed measures to reduce or respond to such demand(s) are:

   None.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

   The Plan was prepared in response to a State requirement for the proper management of solid waste, and it is intended to comply with all applicable local, state and federal laws and requirements regarding protection of the environment.

ISLAND COUNTY
PLANNING & COMMUNITY DEVELOPMENT
PHONE: (360) 679-7339 ■ from Camano (360) 629-4522, Ext. 7339 ■
from S. Whidbey (360) 321-5111, Ext. 7339 FAX: (360) 679-7306 ■
1 NE 6th Street, P. O. Box 5000, Coupeville, WA 98239-5000
Internet Home Page: http://www.islandcountywa.gov/planning/

WAC 197-11-970 Determination of Nonsignificance (DNS).

DETERMINATION OF NONSIGNIFICANCE

Description of proposal: Proposed Island County Solid Waste and Moderate Risk Waste Management Plan that will provide guidance on program development and implementation of solid waste and public education for and administration of solid waste management. This is a non-project action and no adverse impacts are expected with the adoption of the plan.

Proponent: Island County Public Works

Location of proposal, including street address, if any: The proposal would apply throughout unincorporated Island County.

Lead Agency: Island County Planning and Community Development

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030 (2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

☑ This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below. Comments must be submitted by . 2/12/2020

Responsible official: Hiller West

Position/Title: Community Development Manager Phone.: 360-678-7814

Address: 1 NE 6th Street, Coupeville WA 98239

Date.: 1/24/2020 Signature

☑ You may appeal this determination;
To Island County Hearing Examiner Clerk
c/o Island County, P.O. Box 5000, Coupeville, WA 98239
no later than 4:30 on 2/12/2020.
By mail or in person at 1 NE 6th Street, Coupeville WA 98239

You should be prepared to make specific factual objections.
Contact: Island County Hearing Examiner Clerk to read or ask about the procedures for SEPA appeals.

APPENDIX E

ALTERNATIVE RECYCLING PLAN

INTRODUCTION

This appendix contains an alternative recycling plan that was required by the Department of Ecology (Ecology) in response to a provision in State law. Washington State law requires curbside recycling services to be provided in urban areas, unless an alternative plan is approved by Ecology. This provision was adopted through Substitute House Bill No. 1671 (the Waste Not Washington Act) in 1989. At the time, this was recognized as landmark legislation and it continues to be considered as such today. Among other things, this legislation also adopted the goal for achieving 50% recycling statewide by 1995 and recognized the need to avoid excessive packaging, conduct comprehensive public education, and the need for government entities to "set an example by implementing aggressive waste reduction and recycling programs at their workplaces and by purchasing products that are made from recycled materials and are recyclable."

The attached plan was approved by Ecology on June 17, 2019.

Request for Approval of an Alternative Program for Recycling in Langley and Freeland

BACKGROUND

Washington State law requires curbside recycling services to be provided in urban areas (see Attachment 1), unless an alternative plan is approved by the Department of Ecology (Ecology). This provision was adopted through Substitute House Bill No. 1671 (the Waste Not Washington Act) in 1989. At the time, this was recognized as landmark legislation and it continues to be considered as such today. Among other things, this legislation also adopted the goal for achieving 50% recycling statewide by 1995 and recognized the need to avoid excessive packaging, conduct comprehensive public education, and the need for government entities to "set an example by implementing aggressive waste reduction and recycling programs at their workplaces and by purchasing products that are made from recycled materials and are recyclable." It is interesting to note that even now, 30 years after this legislation was approved by Governor Booth Gardiner on May 15, 1989, most of the issues addressed in this far-sighted legislation remain relevant. Government entities at all levels continue to strive to meet the goals and standards espoused in this legislation. Which is not to say that there has been no change, however, and recycling in particular has evolved significantly in the past 30 years.

Over the past 30 years, recycling has grown from a system that relied on a high degree of source separation to the commingled approach now used in most areas. Where there was many small businesses and non-profit organizations involved in recycling, curbside recycling now is conducted almost solely by the same large companies that also collect garbage and operate landfills. Where once contamination rates of 5 to 10% were considered problematic, many areas are now seeing 25 to 40% of the materials collected from curbside routes being thrown away as contamination and unrecovered recyclables. The markets for the materials collected have changed as well, where once the recycling system in Washington relied significantly on paper mills in the Pacific Northwest and other domestic markets, markets had shifted primarily overseas until recently when the access to these markets was cut off. Finally, the materials in the recycling and waste streams have grown increasingly complex, thanks to changes such as a reduction in newspaper and new technologies in packaging.

In Island County, there are four areas designated as urban according to the Island County Comprehensive Plan (ICCP): two cities (Oak Harbor and Langley), one town (Coupeville) and one urban growth area (Freeland). Two of these areas are currently served by curbside recycling (Coupeville and Oak Harbor) and two are not (Langley and Freeland). Curbside recycling is also available on Camano Island. Several attempts have been made in the past to implement curbside recycling in Langley, Freeland and other areas of Whidbey Island, but none of these efforts have worked out. Previous attempts have included a proposal by Island Disposal in 2009 and a service level ordinance a few years later that was first adopted and then retracted by Island County. More recently, Island County staff were in discussions with Island Disposal about

how curbside recycling could be implemented in additional areas, but then the recycling markets suffered a serious downturn and these discussions had to be put on hold.

It is the long-term goal that Langley and Freeland be served by curbside recycling. This goal is recommended in the Island County Solid Waste and Moderate Risk Waste Management Plan, and was recently reaffirmed in discussions by the Island County Solid Waste Advisory Committee. Hence this Request for an Alternative Program (if approved) should be considered only a temporary measure to satisfy State law until such time as the recycling markets recover sufficiently to allow a reasonable approach for implementing new curbside recycling programs.

The rest of this document is primarily directed at providing the information required by State law (see Attachment 1), which includes "anticipated recovery rates and levels of public participation, availability of environmentally sound disposal capacity, access to markets for recyclable materials, unreasonable cost impacts on the ratepayer over the six-year planning period, utilization of environmentally sound waste reduction and recycling technologies, and other factors as appropriate."

CURRENT CONDITIONS

Demographics

According to data from the Office of Financial Management (OFM), 1,175 people lived in Langley in 2018. OFM data also shows that there are a total of 762 housing units in Langley, with about 78 units in multi-family housing.

Data from the ICCP and the related Freeland Subarea Plan show that 539 people live in Freeland in 266 housing units. There are no multi-family units in Freeland, although about 70 people reside in an assisted living facility (Maple Ridge).

Existing Practices

Langley was incorporated as a city in 1913. The city currently provides other utility services but is not actively in waste collection or recycling. Langley provides water service, sewer service and stormwater management. Langley also operates a drop-off yard debris collection site at its wastewater treatment plant, where the yard waste is mixed with sewage solids, composted and the resulting Class A biosolids are given away.

Freeland is designated as a non-municipal urban growth area (NMUGA), and is the only NMUGA in Island County. Freeland lacks urban services such as public sewer and stormwater systems, but the designation of this area as an NMUGA is intended to encourage the development of infrastructure that is characteristic of urban growth.

In both Langley and Freeland, Island Disposal collects residential and commercial solid waste as part of their certificated services in the unincorporated areas of Whidbey Island. Island Disposal's rates and services in this area are regulated by the UTC, and are not controlled to any degree by Langley or Island County.

Both Langley and Freeland are currently well-served by recycling drop-off sites at Bayview Dropbox and Island Recycling. The Bayview Dropbox is located 5.0 miles from Langley (about a ten minute drive) and 3.7 miles from Freeland (about a six minute drive). The Bayview Dropbox collects the typical types of recyclable materials (paper, plastic bottles, cans and glass), as well as clothing, motor oil, batteries, cell phones, fluorescent light bulbs, and scrap metal. The Bayview Dropbox is open four days per week. Island Recycling, which is located in Freeland and is 9.3 miles (about 17 minutes) from Langley, collects a wider variety of materials. Island Recycling is open six days per week (the facility is closed on Mondays).

Participation and Recovery Rates

In general, participation and recovery rates are much better for curbside recycling programs than for drop-off programs. In this case, however, it must be kept in mind that the alternatives are either:

- a drop-off program providing access to a wider range of materials, and that results in lower amounts of contamination, or
- a voluntary curbside program that would likely have low participation and that would not collect glass.

The assumptions about the curbside program are due to the fact that these are certificated areas where the curbside services would be conducted by a Waste Connections company (Island Disposal). As a rule, Waste Connections is well-known for not including glass in their curbside recycling programs, and instead collecting glass through drop-off sites or not at all. And since the new curbside programs would be in areas controlled by the UTC certificate, the recycling service would be optional (just as garbage service is optional) and the additional cost would not be subsidized or hidden in any way. The current garbage subscription rate in the Island Disposal service area (for Whidbey Island exclusive of the cities of Oak Harbor and Coupeville) is 46% (based on data provided by Waste Connections in mid-2018). Since Island Disposal does not provide curbside recycling in this area, there is no data on this, but curbside recycling is provided by Waste Management on Camano Island. On Camano Island, the garbage subscription rate is 55% and the curbside recycling rate is 28% of the total households in that area (both figures are as of January 1, 2018). Since the garbage subscription rate is lower on Whidbey Island, it would naturally follow that the recycling subscription would be lower as well (all other things being equal, but the cost of the service and inability to recycle as many materials, such as glass, could affect this). Hence, the projected figure is that there would be a 23% subscription rate for curbside recycling in Langley and Freeland.

The best available data on the potential amount diverted through new curbside programs in Freeland and Langley comes again from the Camano Island program. In 2017, the curbside recycling program operated by Waste Management on Camano Island collected 607 tons from 2,500 customers, or 486 pounds per household per year. This figure would need to be adjusted for the amount of glass, since glass is included in the Camano Island mix but would not likely be in the Whidbey Island mix, leading to an estimate of 374 pounds per household per year for a

curbside program in Langley and Freeland (based on glass being 23% of the mix, which is from a Kitsap County study in 2015). This leads to the projected results shown in Table 1.

Table 1: Projected Results of Curbside Programs

	Total Households	Projected Participation Rate	Projected Pounds per Household per Year	Tons per Year
Freeland	266	23%	374	11.4
Langley	762	23%	374	32.8

Note that the projected amount for both areas together (44 tons per year) would increase Island County's current (2016) recycling rate from 34.3% to 34.4%. It should also be noted that the projected amounts have not been adjusted for contamination levels. Based on recent studies in Clark and Kitsap Counties, contamination rates of 10% to 20% can be expected. With the additional losses of "good recyclables" that occur in current processing facilities, the actual amount of materials recycled is only 60% to at best 80% of what is collected. This decreases the anticipated results of curbside recycling in these two areas from 44 tons per year to 27 to 35 tons per year.

There is no hard data available on the participation rates and recovery amounts that are occurring through local drop-off programs in Island County, but it is easy to believe that drop-off services are providing comparable results, or nearly so, to the 44 tons per year projected above (or to be more precise, to the amount recycled minus contamination). This conclusion is based on:

- the significant incentive of using free recycling to avoid tipping fees for garbage,
- the ability to drop off a wider variety of materials,
- the proximity of two good options for drop-off recycling,
- the lower levels of contamination inherent in drop-off programs (see the following paragraph), and
- the generally pro-environmental ethics of Island County residents.

A final important point about the differences between the existing drop-off services and a possible curbside recycling program is the level of contamination. As noted above, contamination levels in current curbside recycling programs range from 10% to 20% and possibly higher in some areas. Contamination levels at drop-off sites are much lower, at least for staffed sites. In the case of both the Bayview Dropbox and Island Recycling, customers are assisted as needed and the contents of drop-off boxes are monitored closely for contamination. Based on observations made at these facilities, it is reasonable to project that contamination levels are very low, from 0% to 1%.

Current Markets for Recyclable Materials

The current market problems for recyclable materials are well-documented and do not need to be explained at length here. In summary, much of the paper and plastics collected through recycling programs in the Pacific Northwest were being marketed to companies in China until recently, when the Chinese government banned most of these imports. After much initial chaos, including some cases where recyclable materials were instead landfilled, the situation has stabilized and most of the recyclable materials are now going to alternative markets. The situation is still shaky, however, and prices for the materials are extremely depressed compared to the levels enjoyed a few years ago.

According to information recently compiled by Ecology and provided in a Powerpoint document titled "Recyclable prices in the Pacific Northwest," the market prices for some plastic grades were actually better in 2018 than in 2016. Prices for other plastic grades (colored HDPE, mixed rigid plastics and commingled types 3-7) were significantly reduced. The larger problem is the price of various paper grades, since paper makes up over half[1] (by weight) of the materials collected from residential sources. The data compiled by Ecology shows that paper prices dropped by 44% to 91% from mid-2017 to 2018. Prices for glass bottles and metal cans were relatively stable over that same time period and even increased slightly (by 9% to 27%).

While the above information on markets is important, it is not the entire story. Actual access to markets depends on several other factors, including the degree of contamination, location and transportation charges, and other factors. When markets become tight, it is usually the lowest-quality (most contaminated) materials that are rejected first, hence contamination levels can be critical for marketability at times. At the local level, the market price is often less important than collection and processing costs (although of course market prices affect processing charges). Processing costs and market access are significant concerns in Island County. Island Recycling has had serious problems finding markets for their materials at times in the past few years, and Oak Harbor has experienced substantial increases in processing costs for their materials. The recyclables collected by Oak Harbor are delivered to Island Disposal, and Island Disposal transports those to Pioneer Recycling (in Frederickson, which is near Tacoma). The charge for this service has tripled in the past year, going from $45 per ton to $94.35 per ton in October 2018, and now to $135 per ton as of June 1, 2019.

Future markets for recyclable materials are expected to improve due to the several new or expanded paper mills being developed in the Northwest and throughout the United States, which are expected to come on line within the next few years. Domestic markets are also helping to absorb plastics and other recyclables.

Availability of Environmentally-Sound Disposal

[1] In curbside programs where glass is included in the mix of recyclables collected, the paper grades make up 50% to 60% of the weight of materials. In areas where glass is not part of the mix, because it is not collected or it is collected through drop-off sites, the amount of paper is higher.

This is perhaps the one area where the 30-year old legislation is outdated. The progress made over the past three decades provides Island County and other Washington counties with well-managed disposal systems utilizing transfer stations and landfills that meet strict standards for environmental safety. Residents of all Washington counties also have access to garbage collection services that use these disposal systems. As a result, this factor is perhaps less of a concern now than it was 30 years ago.

Utilization of Environmentally Sound Waste Reduction and Recycling Technologies

The use of environmentally-sound waste reduction and recycling technologies may also seem like a simple or outdated concept, but it is actually a more complex question than the use of environmentally-sound disposal.

Waste Reduction: The primary activities addressed in Island County for waste reduction include reuse of household goods, repair of consumer products to extend their useful life, avoiding wasted food, backyard composting, methods that reduce the toxicity of wastes, and education to support these activities. Except for backyard composting, it's not likely that any of these could be practiced in an unsound manner. In an extreme case, backyard composting could be done in ways that would be less than environmentally sound but these instances would be both rare and eventually addressed through education or code compliance actions.

Recycling: Whether recent practices in recycling can be considered environmentally sound is an open question. The shipment of large quantities of recyclables with high amounts of contamination to China and other countries has created environmental problems in those other countries. At the base of this problem is the current reliance on single-stream recycling, where mixed materials collected for recycling cannot be fully sorted by current processing facilities. This means that not only are contaminants shipped out with the recyclables sent to markets but a substantial portion of the "good recyclables" are also lost because those are shipped to the wrong market with other types recyclable materials or they are lost in the processing residuals. This loss of recyclable materials can hardly be viewed as a sustainable practice. To the extent that drop-off programs do a better job of delivering the correct recyclables to the right market, and with lower amounts of contamination, drop-off programs have a clear advantage over curbside programs in being environmentally sound.

Unreasonable Cost Impacts on the Ratepayer over the Six-Year Planning Period

There is no question that implementing curbside recycling in additional areas at this point in time, whether in Island County or in any part of Washington State, would create an unreasonable cost impact to ratepayers. With the current low market prices causing very low or even negative prices for many of the primary recyclables, the resulting lack of offsetting revenues means that ratepayers will need to pay significantly more for such programs. As mentioned above, the current market conditions have caused the processing charge for Oak Harbor to be increased from $45 to $135 per ton.

FUTURE PLANS

It has been the goal for many years to implement curbside recycling in Freeland and Langley, or actually throughout Whidbey Island, and that remains the goal. Steps that were being taken toward this goal were put on hold when recycling suffered due to the loss of Chinese markets. It is unknown at this point if markets will recover sufficiently to allow curbside recycling to be implemented in these areas during the next six year planning period (2020 to 2025). It is also unknown exactly what a future curbside program in these areas will look like, especially since that would likely be determined largely by Island Disposal and the UTC. Recent statements by the UTC have made it clear, however, that the materials to be included in future curbside recycling programs will need to meet strict standards for marketability. For now, it can only be assumed that the existing recycling drop-off programs will continue in a similar fashion and at a similar cost, as there are no foreseeable plans to change those programs and the County has a commitment to continue to support Island Recycling and the Bayview Dropbox.

Attachment 1

State Law concerning Curbside Recycling in Urban Areas

From RCW 70.95.090:

Each county and city comprehensive solid waste management plan shall include the following:

(6) A comprehensive waste reduction and recycling element that, in accordance with the priorities established in RCW 70.95.010, provides programs that (a) reduce the amount of waste generated, (b) provide incentives and mechanisms for source separation, and (c) establish recycling opportunities for the source separated waste.

(7) The waste reduction and recycling element shall include the following:

(a) Waste reduction strategies;

(b) Source separation strategies, including:

(i) Programs for the collection of source separated materials from residences in urban and rural areas. In urban areas, these programs shall include collection of source separated recyclable materials from single and multiple-family residences, unless the department approves an alternative program, according to the criteria in the planning guidelines. Such criteria shall include: Anticipated recovery rates and levels of public participation, availability of environmentally sound disposal capacity, access to markets for recyclable materials, unreasonable cost impacts on the ratepayer over the six-year planning period, utilization of environmentally sound waste reduction and recycling technologies, and other factors as appropriate. In rural areas, these programs shall include but not be limited to drop-off boxes, buy-back centers, or a combination of both, at each solid waste transfer, processing, or disposal site, or at locations convenient to the residents of the county. The drop-off boxes and buy-back centers may be owned or operated by public, nonprofit, or private persons;

APPENDIX F

RESOLUTIONS OF ADOPTION

INTRODUCTION

This appendix contains the resolutions that document the adoption of this Plan by the Island County Board of Commissioners and the cities and town.

CITY OF LANGLEY
RESOLUTION NO. 807

A RESOLUTION OF THE CITY OF LANGLEY, WASHINGTON ADOPTING THE ISLAND COUNTY COMPREHENSIVE SOLID WASTE AND MODERATE RISK WASTE MANAGEMENT PLAN.

WHEREAS, RCW 70.95 assigns responsibility for solid waste management to local governments, and each unit of local government is required to prepare and maintain in current condition a comprehensive solid waste management plan in accordance with RCW 70.95.080 and 70.95.110; and

WHEREAS, RCW 70.105 assigns primary responsibility for moderate-risk waste management to local governments, and each unit of local government is required to prepare a local moderate-risk waste management plan in accordance with RCW 70.105.220; and

WHEREAS, the Island County Solid Waste Advisory Committee participated in the preparation of the plans in accordance with RCW 70.95. 165(3) and recommended approval of the Draft Final Island County Comprehensive Solid Waste and Moderate-Risk Waste Management Plan dated February 2020; and

WHEREAS, the City Council, by motion, approved the Draft Final Plan dated February 2020.

NOW THEREFORE, BE IT RESOLVED by the City Council of the City of Langley that the Draft Final Comprehensive Solid Waste and Moderate-Risk Waste Management Plan dated February 2020, be adopted pursuant to RCW 70.95 and RCW 70.105.

PASSED BY THE CITY COUNCIL OF THE CITY OF LANGLEY and Approved by the Mayor this 8th day of June 2020.

Tim Callison, Mayor

ATTEST:

Monica M. Felici, Clerk-Treasurer

RESOLUTION NO. 20-07

A RESOLUTION OF THE CITY OF OAK HARBOR, WASHINGTON, ADOPTING THE ISLAND COUNTY COMPREHENSIVE SOLID WASTE AND MODERATE-RISK WASTE MANAGEMENT PLAN

WHEREAS, RCW 70.95 assigns responsibility for solid waste management to local governments, and each unit of local government is required to prepare and maintain in current condition a comprehensive solid waste management plan in accordance with RCW 70.95.080 and 70.95.110; and

WHEREAS, RCW 70.105 assigns primary responsibility for moderate-risk waste management to local governments, and each unit of local government is required to prepare a local moderate-risk waste management plan in accordance with RCW 70.105.220; and

WHEREAS, the Island County Solid Waste Advisory Committee participated in the preparation of the plan in accordance with RCW 70.95.165(3) and recommended approval of the Draft Final Island County Comprehensive Solid Waste and Moderate-Risk Waste Management Plan, dated February 2020; and

WHEREAS, the Oak Harbor City Council reviewed the Draft Island Count Comprehensive Solid Waste and Moderate-Risk Waste Management Plan on March 25, 2020, and City staff reviewed the Draft Final Plan and recommends adoption by the City Council.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Oak Harbor, Washington, that the Island County Comprehensive Solid Waste and Moderate-Risk Waste Management Plan, dated February 2020, be adopted pursuant to RCW 70.95 and RCW 70.105.

PASSED and approved by the City Council this 7th day of April 2020.

CITY OF OAK HARBOR

Bob Severns, Mayor

Attest:

Carla Brown, City Clerk

Approved as to Form:

Anna Thompson, City Attorney

RESOLUTION NO. 20-07

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF COUPEVILLE, ISLAND COUNTY, WASHINGTON ADOPTING THE ISLAND COUNTY SOLID WASTE AND MODERATE RISK WASTE MANAGEMENT PLAN

WHEREAS, RCW 70.95 assigns responsibility for solid waste management to local governments, and each unit of local government is required to prepare and maintain in current condition a comprehensive solid waste management plan in accordance with RCW 70.95.080 and 70.95.110; and

WHEREAS, RCW 70.105 assigns primary responsibility for moderate risk waste management to local governments, and each unit of local government is required to prepare a local moderate risk waste management plan in accordance with RCW 70.105.220; and

WHEREAS, the Town of Coupeville, Cities of Oak Harbor and Langley and Island County have entered in to an interlocal agreement to mutually and cooperatively comply with RCW 70.95 and 70.10; and

WHEREAS, the Island County Solid Waste Advisory Committee, of which Coupeville is a member, participated in the preparation of the plan in accordance with RCW 70.95.165(3) and recommended approval of the Island County Solid Waste and Moderate Risk Waste Management Plan dated February 2020; and

NOW THEREFORE, BE IT RESOLVED by the Town Council of the Town of Coupeville, Washington, that the Island County Solid Waste and Moderate Risk Waste Management Plan dated February 2020 be adopted pursuant to RCW 70.95 and RCW 70.105.

PASSED by the Town Council of the Town of Coupeville and approved by the Mayor this 9th day of June, 2020.

TOWN OF COUPEVILLE:

Mayor Molly Hughes

ATTEST:

Clerk Treasurer Kelly Beech

BEFORE THE BOARD OF COUNTY COMMISSIONERS
OF ISLAND COUNTY, WASHINGTON

IN THE MATTER OF ADOPTING THE ISLAND COUNTY COMPREHENSIVE SOLID WASTE AND MODERATE RISK WASTE MANAGEMENT PLAN	))))	**RESOLUTION NO. C-55-20 SW-03-20**

WHEREAS, RCW 70.95 assigns responsibility for solid waste management to local governments, and each unit of local government is required to prepare and maintain in current condition a Comprehensive Solid Waste Management Plan in accordance with RCW 70.95.080 and 70.95.110; and

WHEREAS, RCW 70.105 assigns primary responsibility for moderate-risk waste management to local governments, and each unit of local government is required to prepare a local moderate-risk waste management plan in accordance with RCW 70.105.220; and

WHEREAS, the Island County Solid Waste Advisory Committee, including representatives of the Cities of Oak Harbor, Langley and the Town of Coupeville, jointly participated in the preparation of the of the plans in accordance with RCW 70.95.165(3) and recommended approval of the Final Island County Comprehensive Solid Waste and Moderate-Risk Waste Management Plan dated October 2019 on November 8, 2019; and

WHEREAS, the Oak Harbor City Council reviewed the Plan dated February 2020 and by motion approved and adopted said Final Plan by Resolution 20-07, on April 7, 2020; and

WHEREAS, the Coupeville Town Council reviewed the Final Plan dated February 2020 and adopted said Final Plan by Resolution 20-07, on June 9, 2020; and

WHEREAS, the Langley City Council reviewed the Final Plan dated February 2020 and adopted said Final Plan by Resolution 807, on June 8, 2020; **NOW, THEREFORE,**

BE IT HEREBY RESOLVED by the Board of Island County Commissioners that the Final Island County Comprehensive Solid Waste and Moderate-Risk Waste Management Plan dated February 2020, be adopted pursuant to RCW 70.95 and RCW 70.105.

APPROVED AND ADOPTED this 21st day of July, 2020.

BOARD OF COUNTY COMMISSIONERS
ISLAND COUNTY, WASHINGTON

Janet St. Clair, Chair

Helen Price Johnson, Member

Jill Johnson, Member

BOARD OF CO. COMMISSIONERS EST ISLAND COUNTY 1853 WASHINGTON

Virginia Shaddy
Clerk of the Board