

Funding Mechanisms for Solid Waste

June 30, 2017 FINAL

Part 2. Identify Potential Funding Mechanisms

Overview

As the Department of Ecology was updating the State Solid and Hazardous Waste Plan, local governments and other stakeholders expressed concerns regarding how to strengthen the state's funding system for solid waste management. To help address those concerns, the Department of Ecology contracted with Cascadia Consulting Group to research potential options. This research is divided into three parts. This paper reports on Part 2, identifying potential funding mechanisms.

Cascadia Consulting Group (Cascadia) and Abbe and Associates identified and assessed potential solid waste funding mechanisms by reviewing previously published papers, conducting web-based research, and conducting selected interviews. This paper represents the recommended funding mechanisms based on that research. Appendix 1 contains a list of the funding mechanisms that Cascadia reviewed in detail, and a description of the key information and criteria collected for each funding mechanism is included in Appendix 2. The detailed review is found in Appendix 3, which is an Excel-based database.

FCS GROUP drew on its extensive experience with funding mechanisms and rate structures for solid waste, drinking water, wastewater, electricity, and stormwater utilities to develop guidance for rate setting for solid waste funding. This guidance is presented in a summary section (Appendix 4).

Please note that Cascadia summarized research and interview findings but is not qualified to provide legal advice. This document has not been reviewed for legal accuracy.

Key Findings

Overall, the following themes emerged from the research.

Stakeholders identified the following components of the solid waste system as having the greatest gaps in funding:

- Education, outreach, and technical assistance
- Permitting, enforcement, and regulatory programs
- Recycling and composting collection system and infrastructure
- Moderate risk and household hazardous waste
- Litter and illegal dumping prevention and clean-up
- Waste prevention
- Monitoring, maintenance, and remediation of closed landfills

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Flexible city and county mechanisms exist but may be underutilized by municipalities. There appear to be no legal barriers to raising adequate local funding to pay for all system components, although increasing fees and taxes is politically unpopular.

- **Cities** have the authority to provide collection directly or to establish waste contracts that include collection of all waste streams (including moderate risk waste), education and outreach, litter cleanup, or other desired services (Revised Code of Washington 35.21.120). Contracts can also include administrative and other fees or surcharges to support city provision of other waste system components, such as enforcement, planning, or post-closure landfill activities. Through these contracts, cities have broad flexibility in how they set collection rate structures both to be sustainable and to incentivize recycling, composting, and waste prevention.
- **Cities** also have the authority to establish and manage the solid waste system (RCW 35.21.152) and to adopt ordinances that mandate garbage, recycling, or composting collection (RCW 35.21.130).
- **Counties** have the authority to establish a solid waste disposal district with the power to charge excise taxes on residents and business as well as to charge disposal fees based on weight or volume accepted at a disposal site or transfer station (RCW 36.58.100-150). Disposal districts have broad flexibility in designing and setting excise taxes. Counties also have the authority to establish a solid waste collection district to mandate collection (RCW 36.58A). These mechanisms work best when cities and counties cooperate because counties cannot include incorporated cities in their collection or disposal districts without approval by those cities.
- **Counties** also have the authority to set minimum standards for collection and solid waste handling (RCW 70.95.090) in unincorporated areas for WUTC-regulated service providers or where incorporated cities have signed on to the county's solid waste management plan. Counties have limited ability to influence collection rate structures of regulated waste collection companies (RCW 81.77), which are proposed by private waste collection companies and approved by the Washington Utilities and Transportation Commission.
- **Local health departments** have the authority to establish and enforce regulations that protect public health and to establish fee schedules for services provided (RCW 70.05.060). In addition to setting fees for permitting, the King County Board of Health has established a local hazardous waste fee charged on solid waste and sewage treatment to pay for collection, education, and other services that it provides to local residents and businesses related to moderate risk waste (King County Board of Health Code 11.04.060).

State funding, a key source for local governments, has been reduced due to redirections of historic funding sources by the State Legislature, oil-price volatility, and a historic lack of dedication of the Solid Waste Collection Tax to the solid waste system. Dedicating and improving these funding sources could restore and increase funding for the solid waste system.

- State-level funding supports grants that are a key source of funding for local governments, particularly for rural and Eastern Washington communities.
- The Solid Waste Collection Tax, an excise tax on collectors of solid waste (specifically garbage), has historically been used to fund loans for public infrastructure (via the Public Works Trust

Fund) but has not been dedicated to solid waste infrastructure.¹ Analysis of spending on solid waste management in 2005 estimated that approximately 10 percent of Solid Waste Collection Tax revenues are used for solid waste infrastructure.² Furthermore, since 2011, the State Legislature has redirected Solid Waste Collection Tax revenues to the General Fund and, starting in 2016, the Education Legacy Trust Account.³

- Coordinated Prevention Grants, which provide grants from the state to local governments, have been reduced from \$28 million in the 2013-2015 biennium to \$15 million in 2015-2017, with further reductions proposed for 2017-2019. In addition, the historic funding source for these grants, the Hazardous Substance Tax, has decreased in recent years as oil prices decreased. Additionally, these funds have been redirected to fund environmental activities that were previously funded by the state's General Fund.⁴
- Starting in 2009, funding redirections of the Litter Tax forced the Department of Ecology to suspend litter programs such as a prevention campaign and survey, litter hotline, and emphasis on secured load requirements, as well as staff work on waste reduction and recycling.⁵

The primary new mechanism used elsewhere is extended producer responsibility (EPR) for common recyclable products, such as packaging and printed paper. Jurisdictions in Canada and Europe have successfully used this mechanism to fund collection and education for covered materials.

- Washington State and individual counties have already enacted EPR for limited categories of products, including certain electronics, mercury-containing lights, and pharmaceuticals. The state could adopt additional targeted EPR programs to cover the costs of addressing materials that pose particular problems related to improper disposal or public health, such as tires, additional electronic devices, or other items.
- British Columbia's EPR program, managed by Recycle BC (formerly Multi-Material BC), has achieved a 77% recovery rate for covered products. A recent audit by the province's auditor general identified opportunities for improvement to address stakeholder concerns regarding reporting, enforcement, accessibility, and consumer awareness. The report recommended monitoring the effects of having a single stewardship plan, potentially introducing competition into the program, and increasing compliance and enforcement. In particular, increasing compliance and enforcement can help generate the additional funds needed to support province-wide collection and recycling infrastructure.

¹ Washington State Legislature, RCW 82.18.040 (Solid Waste Collection Tax: Collection of tax—Payment to state). Washington State Legislature, Chapter 43.155 RCW (Public Works Projects).

² Cascadia Consulting Group, "Solid Waste Management Cost Flows in Washington State," 2007, <https://fortress.wa.gov/ecy/publications/SummaryPages/1607013.html>.

³ Washington State Legislature, RCW 82.18.040 (Solid Waste Collection Tax: Collection of tax—Payment to state).

⁴ Washington State Office of Financial Management (Budget Division), "Report to the Legislature: Washington State Model Toxics Control Act Accounts," November 2016, (www.ofm.wa.gov/reports/MTCA_ReportNov2016.pdf).

⁵ Washington State Department of Ecology, Budget & Program Overview 2015-2017, Publication #15-01-007, December 2015.

Washington State Legislature, HB 1060 - 2015-16, "Directing state investments of existing Litter Tax revenues under chapter 82.19 RCW in material waste management efforts without increasing the tax rate," 2015, <http://app.leg.wa.gov/billsummary?BillNumber=1060&Year=2015>.

- While EPR regulations are common in Europe and Canada, they face political concerns in Washington and in many other states. Because EPR programs may shift both costs and revenues within the waste system, passing new EPR laws typically requires extensive engagement of producers, retailers, and public and private waste-system stakeholders.

Solid waste collection rate structures could be made more transparent and sustainable by using practices common in other utilities.

- Sustainable rate structures must balance the relatively fixed costs of providing service—such as providing a container, providing education and outreach, and account administration—with the variable usage costs—such as tip fees for disposing or processing waste. Solid waste collectors could list separate fees for these two types of costs on residential bills, as is common for on-call commercial solid waste accounts and in other utilities used by residents.
- Rate structures that provide “free” recycling and composting inaccurately present the true costs of each service to customers. At the same time, charging collection costs for all three waste streams based on garbage service could lead to illegal dumping or contamination of recovery streams as the apparent cost of garbage service increases. To increase transparency and rate sustainability, municipalities could set minimum service standards with mandatory recycling and composting collection, and collectors could charge separate fees for each service. Charging quantity-based rates for all three streams could also incentivize waste prevention, not just diversion; however, rates for additional recycling and composting capacity should be set lower than additional garbage to continue incentivizing diversion for the remaining waste.

Other funding mechanisms used elsewhere included methods that do not appear superior to mechanisms already authorized in Washington State.

- State taxes or fees based on tons of garbage disposed will become less sustainable as garbage declines in the future due to increasing recycling, composting, and waste prevention. Fees based on total waste disposed or processed will similarly become less sustainable, albeit at a slower rate. Washington’s existing Solid Waste Collection Tax, if dedicated to the solid waste system and expanded to cover all garbage, recycling, and compost generated, is a suitable alternative because it would expand the tax base to all materials that require end-of-life management. In addition, because the tax is based on collected revenues rather than tonnages, it will scale with changes to cost of handling (with cost-of-service to customer as a proxy).
- Sales taxes have no direct nexus with solid waste, are regressive, have maximum rates that are limited by state law, are already used to fund many other government functions.
- Property taxes have maximum rates that are limited by the state constitution and are already used to fund many other government functions. Disposal district excise taxes, local health department fees, and city fees in collection contracts offer similar flexibility in collecting funds, albeit per collection account rather than property, without constitutional limitations and with a full dedication of revenues to the solid waste system.
- Real estate excise taxes have no direct nexus with solid waste and are variable as the real estate market fluctuates.

- General fund revenues are less reliable than dedicated funding sources, as demonstrated by recent redirections by the State Legislature.

Other minor mechanisms that could provide some additional funding for specific uses include:

- Development impact fees to support solid waste infrastructure (allowed in Washington for impacts to public infrastructure listed in RCW 82.02.090, but state law does not currently allow impact fees for solid waste infrastructure).
- Fees on construction, remodeling, or deconstruction permits to support construction and demolition recycling and waste prevention activities.

While not addressed by this current research effort, opportunities to reduce costs, such as by switching to every-other-week garbage collection, may exist to extend the reach of current funding sources.

Organization of This Document

Cascadia assessed existing and potential funding mechanisms to identify mechanisms that appear most promising in terms of financial strength, financial stability, environmental sustainability, social justice sustainability, and feasibility. The following sections present:

- **Summary tables of state, county, and city mechanisms**, highlighting which components of the solid waste system they do or could fund. Examples of system components include collection and disposal operations, education and outreach, enforcement, and planning.
- Detailed descriptions of each mechanism as it is currently used in Washington and with potential adjustments that could make it more sustainable in the long term, sorted by which entities can use the mechanism:
 - **State mechanisms**
 - Solid Waste Collection Tax (SWCT)
 - Hazardous Substance Tax (HST) for Coordinated Prevention Grants (CPG)
 - Litter Tax
 - Various State Hazardous Waste (Haz. Waste Fees)
 - Washington Utilities and Transportation Commission (WUTC) Fees
 - Core Battery Charge
 - Tire Retailer Fee
 - **State and county mechanisms**
 - Extended producer responsibility (EPR) programs for targeted materials
 - Extended producer responsibility (EPR) programs for general recyclables
 - Advanced recovery fees or advanced disposal fees (ARFs/ADFs)
 - **County mechanisms**
 - Excise taxes
 - Planning fees



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

Washington State Department of Ecology | Funding Mechanisms for Solid Waste

- **County and city mechanisms**
 - Board of Health fees
 - Service mandate
 - Curbside rates
 - Tip fees
 - Permit fees
 - Contract fees
 - Embedded services
 - Recycle revenue sharing

- A summary of lessons from other utilities for **designing sustainable collection rates.**
- **Appendix 1:** List of Funding Mechanisms (research details presented in the attached Excel file).
- **Appendix 2:** FCS GROUP's research memo on utility funding mechanisms.

Summary Tables of Mechanisms

State or State and County Mechanisms

System Component Funded	SWCT	HST (CPG)	Litter Tax	State Haz. Waste Fees	WUTC Fees	Core Battery Charge	Tire Retailer Fee	State and County		
								EPR (targeted)	EPR (general)	ARFs/ ADFs
Garbage										
Collection, transfer, processing/disposal operations	*									*
Capital improvement or equipment	✓									
Closed landfill maintenance, remediation	*									
Waste prevention	*	✓	✓							*
Litter/illegal dumping cleanup and prevention	*	✓	✓				✓			
Permitting and enforcement	*	✓			✓					*
Planning and administration	*	✓								
Recycling or Organics										
Collection, transfer, processing/disposal operations	*	✓					*	✓	*	*
Capital improvement or equipment	✓	✓								
Education, outreach, technical assistance	*	✓	✓					✓	*	*
Waste prevention	*	✓	✓				*		*	*
Permitting and enforcement	*	✓			✓			✓	*	*
Planning and administration	*	✓								
Moderate Risk Waste (MRW)										
Collection, transfer, processing/disposal operations	*	✓				✓		✓		✓
Capital improvement or equipment	✓	✓								
Education, outreach, technical assistance	*	✓		✓				✓		✓
Waste prevention	*	✓		✓						*
Permitting and enforcement	*	✓		✓				✓		✓
Planning and administration	*	✓								

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments

PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

Washington State Department of Ecology | Funding Mechanisms for Solid Waste

Summary Table: County or County and City Mechanisms

System Component Funded	County		County and City							
	Excise Taxes	Planning Fees	Board of Health Fees	Service Mandate	Curbside Rates	Tip Fees	Permit Fees	Contract Fees	Embedded Services	Recycle Revenue Sharing
Garbage										
Collection, transfer, processing/disposal operations	✓				✓	✓		✓	✓	
Capital improvement or equipment	✓				✓	✓		✓		
Closed landfill maintenance, remediation	✓				✓	✓		✓		
Waste prevention	✓				✓	✓		✓	✓	
Litter/illegal dumping cleanup and prevention	✓		✓		✓	✓		✓	✓	
Permitting and enforcement	✓		✓		✓	✓	✓	✓		
Planning and administration	✓	✓			✓	✓		✓		
Recycling or Organics										
Collection, transfer, processing/disposal operations	✓				✓	✓		✓	✓	✓
Capital improvement or equipment	✓				✓	✓		✓		✓
Education, outreach, technical assistance	✓				✓	✓		✓	✓	✓
Waste prevention	✓				✓	✓		✓	✓	✓
Permitting and enforcement	✓		✓		✓	✓	✓	✓		
Planning and administration	✓	✓			✓	✓		✓		*
Moderate Risk Waste (MRW)										
Collection, transfer, processing/disposal operations	✓		✓		✓	✓		✓	✓	
Capital improvement or equipment	✓		✓		✓	✓		✓		
Education, outreach, technical assistance	✓		✓		✓	✓		✓	✓	
Waste prevention	✓		✓		✓	✓		✓	✓	
Permitting and enforcement	✓		✓		✓	✓	✓	✓		
Planning and administration	✓	✓	✓		✓	✓		✓		

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments

State Mechanisms

This section describes mechanisms currently used at the state-level in Washington, along with potential adjustments that could make them stronger or more sustainable funding sources for the solid waste system.

Solid Waste Collection Tax

Applicability

Suitable for Entities

State	Collects directly
Cities	Via pass-through
Counties	Via pass-through
Private Sector	n/a

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations	*	*	*
Capital improvement or equipment	✓	✓	✓
Closed landfill maintenance, remediation	*	--	--
Education, outreach, technical assistance	--	*	*
Waste prevention	*	*	*
Litter/illegal dumping cleanup and prevention	*	--	--
Permitting and enforcement	*	*	*
Planning and administration	*	*	*

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Washington State levies an excise tax of 3.6% on collectors of solid waste, charged as a percentage of the price of transfer, storage, or disposal services provided. To prevent multiple taxation for the same transaction, the Solid Waste Collection Tax (SWCT) does not apply when a solid waste collector uses the services of another solid waste collector. Self-haul customers pay the SWCT at the disposal site. The SWCT is charged on garbage only; materials collected for recycling, composting, or salvage as well as hazardous or toxic wastes are not subject to the tax.

Authorizing legislation (RCW 82.18.020) specifies that SWCT revenues be deposited in the Public Works Trust Fund (PWTF), which supports public infrastructure investments; however, the revenues generated from solid waste are not dedicated to expenditures on solid waste infrastructure. In 2005, the SWCT generated approximately \$28.2 million dollars in revenue, while the PWTF issued an estimated \$2.6 million in grants and loans for solid waste. Based on this spending snapshot, only 10% of SWCT revenues were spent on the solid waste system at that time.

From 2011 to 2015, the State Legislature redirected all revenues from the SWCT to the state’s General Fund. In 2016 to 2018, half of SWCT revenues will be redirected to the General Fund, and the other half will be deposited into the Education Legacy Trust Account.



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

From 1989 to 1995, an additional 1% “companion” solid waste collection tax, whose revenues were deposited into a solid waste management account dedicated to implementing the Waste Not Washington Act.

Potential Adjustments

Options for improving the sustainability of the SWCT as a funding mechanism for the solid waste system include:

- Create and deposit all SWCT revenues into a subaccount within the PWTF that is dedicated to funding public solid waste infrastructure.
- Create and deposit all SWCT revenues into a separate solid waste account that is dedicated to funding the solid waste system, including solid waste infrastructure and potentially other components such as:
 - The Washington State Department of Ecology’s Waste 2 Resources programs.
 - Coordinated Prevention Grants, Public Participation Grants, and the Community Litter Cleanup Program.
 - Backup funding for monitoring, enforcement, and remediation of post-closure landfills that lack adequate funding.
- To provide funding assistance for recycling in counties that are economically distressed or that have minimal access to recycling markets, refund SWCT revenues collected within these counties to the originating county as a grant dedicated to increasing recycling.
- Expand the SWCT to be charged on recycling and organics collection, transfer, storage, processing, and/or sales—at a lower rate than for garbage disposal.

Key Criteria

Financial Strength and Stability

Funding base	Moderate
Garbage quantities	Somewhat correlated
Total waste quantities	Not correlated (<i>somewhat correlated with adjustments</i>)
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	Positive incentives (<i>mixed with adjustments</i>)
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Social sustainability

Impact on people with lower incomes	Regressive
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Authorization and Feasibility

Current authorization	RCW 82.18.020
Feasibility of potential adjustments	Moderate to low

Implementation and Other Considerations

- The nexus between the source of SWCT revenues and the solid waste system supports the political feasibility of adopting potential adjustments.



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

Washington State Department of Ecology | Funding Mechanisms for Solid Waste

- Other states charge a statewide tax based on tons of waste generated or disposed. Washington's SWCT is more financially sustainable because waste handling revenues are not directly correlated with waste quantities.

Hazardous Substance Tax (for CPG)

Applicability

Suitable for Entities

State	Collects directly
Cities	Via pass-through
Counties	Via pass-through
Private Sector	n/a

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations		✓	✓
Capital improvement or equipment		✓	✓
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--	✓	✓
Waste prevention	✓	✓	✓
Litter/illegal dumping cleanup and prevention	✓	--	--
Permitting and enforcement	✓	✓	✓
Planning and administration	✓	✓	✓

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

The first possessor of hazardous substances (petroleum products, pesticides, and certain chemicals) in Washington State must pay an excise tax of 0.7% of the wholesale value of the product. Funds collected from this tax are deposited into the State Toxics Control Account, Local Toxics Control Account, and (in the case of excess amounts) the Environmental Legacy Stewardship Account. A portion of local toxics funds are passed through to local jurisdictions through Coordinated Prevention Grants (CPG), which can be used for solid and hazardous waste planning and implementation projects and solid waste enforcement projects. Historically, Washington jurisdictions—particularly smaller counties and cities—have relied on CPG funds for a significant portion of their local recycling and moderate risk waste programs.⁶ CPG funds have been used to help local governments pay for new recycling containers, processing equipment such as balers and conveyers, and education programs. MTCA funds are also used for Public Participation Grants (PPG), which fund contaminated site and waste management projects by citizen and non-profit groups.

In 2013–2015, approximately 40 percent (\$167 million) of the \$393 million collected under the Hazardous Substance Tax was deposited to the Local Toxics Control Account, which largely funds CPG. Of that funding, \$34 million (9% of the Hazardous Substance Tax revenue and 20% of its contribution to the Local Toxics Control Account) was budgeted to local government grants. Occasionally CPG funding comes from other sources; for example, funding in 2015–2017 came from the State Building Construction Account.⁷

⁶ http://www.ecy.wa.gov/services/fs/2016_ECY_461_Suplmentl_Budget_FINAL_v2.pdf (August 2015):p. 7. CPG provides 31 percent of funding for local recycling and hazardous waste programs (excluding the largest counties).

⁷ Department of Ecology, Waste 2 Resources Program Funding Opportunities: Coordinated Prevention Grants (CPG), <http://www.ecy.wa.gov/programs/swfa/grants/cpg.html> (Accessed January 2017).

Potential Adjustments

Two bills (SB 5501 and HB 1663) were proposed in the Washington State Legislature in 2017 to impose a temporary surcharge above the current rate. This surcharge would only apply when Hazardous Substance Tax revenue falls below a specified amount, as a way to increase stability.

Other options for improving the sustainability of the Hazardous Substance Tax (for CPG) as a funding mechanism for the solid waste system include:

- To reduce volatility, revise the HST to charge taxes based in whole or in part on volume and toxicity, rather than market value, of hazardous substances.
- To reduce complexity and the burden of record-keeping on businesses, revise the HST to charge a business and occupations tax surcharge on businesses that commonly use hazardous substances (exempting businesses that demonstrate they do not use hazardous substances)

Key Criteria

Financial Strength and Stability

Funding base	Dollar value of hazardous substances brought into Washington State
Garbage quantities	Not correlated
Total waste quantities	Not correlated
Commodity prices	Correlated

Environmental sustainability

Recycling, composting, and proper disposal	Positive incentives
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Social sustainability

Impact on people with lower incomes	Mixed or neutral
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Authorization and Feasibility

Current authorization	RCW 82.21
Feasibility of potential adjustments	Moderate for already proposed bills. Low for other adjustments.

Implementation and Other Considerations

- Funding fluctuates substantially with the price and use of petroleum products, and recent decreases in the price of petroleum have created funding shortfalls. In the long term, a transition to clean energy could also reduce funding from this mechanism.
- Funding under this mechanism directed to solid waste activities has been reduced significantly in the past biennium; cuts in the 2017-2019 biennium are also expected.
- As a product-based tax on more than 15,000 products, this funding source is relatively complex to implement because it requires identifying which businesses are using covered products. A business-based tax on types of businesses that typically use hazardous substances, rather than on the substances themselves, could be easier to implement. A 2002 report by the Washington State Department of Revenue recommended revising the HST to a business and occupations tax surcharge.⁸

⁸ Washington State Department of Revenue, "Alternative Ways to Pay for a Clean Environment," 2002.

Litter Tax

Applicability

Suitable for Entities

State	Collects directly
Cities	Via pass-through
Counties	Via pass-through
Private Sector	n/a

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations			
Capital improvement or equipment			
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--	✓	
Waste prevention	✓	✓	
Litter/illegal dumping cleanup and prevention	✓	--	--
Permitting and enforcement			
Planning and administration			

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

The Litter Tax is an excise tax of 0.015% charged on the value of products deemed likely to become litter. The tax is charged to manufacturers, wholesalers, and retailers that sell covered products. Examples of covered products include food, tobacco products, soft drinks, beer and wine, newspapers, containers made from various materials, and more. The list of items subject to the litter tax has not been adjusted since the law's creation in 1971. To reduce complexity for grocers and drug stores, which sell a large number of covered products, these business may choose to pay the tax on a percentage of sales rather than counting each covered product sold.⁹

Historically, the tax has funded the Litter Control Account, which supports state agency efforts to clean up litter, litter grants to local governments, and technical assistance in waste reduction and recycling. Starting in 2011, funding redirections of the Litter Tax forced Ecology to suspend litter programs such as a prevention campaign and survey, litter hotline, and emphasis on secured load requirements.¹⁰ Washington collected over \$20 million in litter tax revenue from 2013–2015. The Department of Ecology's Waste 2 Resources program received \$9.1 million of those funds (45% of the collected revenue) for litter clean-up related activities and waste reduction and recycling work. The main funding redirection of \$5 million per biennium to state park maintenance is supposed to end in fiscal year 2017 (HB 1060); however, at this writing the Governor's budget continues this redirection.¹¹

⁹ Washington Administrative Code, Chapter 458-20-243, subsection 2(b).

¹⁰ Washington State Department of Ecology, Budget & Program Overview 2015-2017, Publication #15-01-007, December 2015.

¹¹ Washington State Legislature, HB 1060 - 2015-16, "Directing state investments of existing Litter Tax revenues under chapter 82.19 RCW in material waste management efforts without increasing the tax rate." Accessed at <http://app.leg.wa.gov/billsummary?BillNumber=1060&Year=2015> in January 2017.

Potential Adjustments

Options for improving the sustainability of the litter tax as a funding mechanism for the solid waste system include:

- The litter tax base has not been adjusted since it was first passed in 1971, so the tax may not apply to some items that are currently found as litter. Consider revising the list of product types to which the tax applies.

Key Criteria

Financial Strength and Stability

Funding base	Dollar value of products likely to become litter
Garbage quantities	Somewhat correlated
Total waste quantities	Somewhat correlated
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	Mixed or no incentives
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Social sustainability

Impact on people with lower incomes	Potentially regressive
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Authorization and Feasibility

Current authorization	RCW 82.19; RCW 70.93
Feasibility of potential adjustments	Moderate to low

Implementation and Other Considerations

- Since 2006, Oakland, California, has charged a litter tax based on the type of business.¹² A 2002 study by the Washington State Department of Revenue recommended revising the Litter Tax into a businesses and occupations tax surcharge.¹³
- Since 2009, San Francisco, California has charge a similar tax on cigarettes to fund litter cleanup.
- Some solid waste stakeholders in Washington have suggested that a bottle bill could be more successful at both reducing litter and increasing recycling than the existing litter tax. However it would only do so for bottles, not for other litter. A study of Washington’s 2010 tax on bottled water, candy and gum (repealed later that year by voter initiative) found that, though proposed as a mechanism to reduce plastic bottle litter, the tax was more effective at raising tax revenue than reducing bottled water sales—and that it did not have a proven effect on litter.¹⁴

Office of Financial Management, 2017-19 Governor’s proposed budgets: Department of Ecology. Accessed at <http://www.ofm.wa.gov/budget17/detail/nl461.pdf> in March 2017.

¹² City of Oakland, “What is the Excess Litter Fee?” Accessed February 2017

(<http://www2.oaklandnet.com/Government/o/CityAdministration/d/NA/OAK057469>)

¹³ Washington State Department of Revenue, “Alternative Ways to Pay for a Clean Environment,” 2002.

¹⁴ London School of Economics USAPP Blog. “Taxes on bottled water are better at raising money than reducing litter.” <http://blogs.lse.ac.uk/usappblog/2016/12/06/taxes-on-bottled-water-are-better-at-raising-money-than-reducing-litter/> (Accessed April 2017)



Various State Fees Related to Hazardous Waste (Voluntary Reduction Plan Fee, Hazardous Waste Generation Fee)

Applicability

Suitable for Entities

State	Collects directly
Cities	n/a
Counties	n/a
Private Sector	n/a

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations			
Capital improvement or equipment			
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--		✓
Waste prevention			✓
Litter/illegal dumping cleanup and prevention		--	--
Permitting and enforcement			✓
Planning and administration			

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Businesses that generate hazardous waste are required to pay an annual fee of \$49. Collected fees are used to provide technical assistance and compliance education assistance to hazardous substance users and hazardous waste generators. In addition, business generators or users of large quantities of hazardous substances (at least 2,640 pounds of hazardous waste per waste generation site per year) are required to develop a voluntary hazardous substance reduction plan. They are also required to pay a separate voluntary reduction plan fee that covers the Department of Ecology’s cost of administration, review, and technical assistance associated with these plans.

Potential Adjustments

Options for improving the sustainability of various state fees related to hazardous waste as a funding mechanism for the solid waste system include:

- Add tiers to the hazardous waste generation fee that scale with the annual quantity of hazardous waste generated.
- Reduce the quantity of hazardous waste generation that exempts businesses from preparing voluntary reduction plans and paying the voluntary reduction plan fee.
- Charge similar fees for solid waste generation and reduction plans to fund business technical assistance regarding recycling, composting, and solid waste prevention.

Key Criteria

Financial Strength and Stability

Funding base	Number of hazardous wastegenerators.
Garbage quantities	Not correlated
Total waste quantities	Not correlated
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	Provides a small incentive for businesses to avoid the fee by reducing or preventing their generation of dangerous waste.
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Social sustainability

Impact on people with lower incomes	Neutral
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Authorization and Feasibility

Current authorization	RCW 70.95E.30
Feasibility of potential adjustments	Moderate

Implementation and Other Considerations

- This mechanism requires identifying affected businesses and accurately assessing their hazardous and dangerous waste generation to assess and enforce the fee. Currently, Ecology uses business classification codes (NAICS codes) to identify businesses that may be subject to the hazardous waste fees.
- The Local Hazardous Waste Management Program in King County currently charges a fee based on level of waste collection service, which is similar to this recommended option but collected on a local rather than statewide level. Coordinating fee collection from all waste collection companies statewide would be substantially more complicated than local collection. One administratively simpler option would be to increase the Solid Waste Collection Tax (based somewhat on quantity generated but not targeted at businesses). Another simple option focused on businesses would be to charge a fee based on NAICS code and number of employees. A recent study of waste generation in California estimated the average number of tons of waste generated per employee per year by broad industry categories. However, a fee based strictly on business type and employee counts would not incentivize individual businesses that have already prevented and diverted waste.



WUTC Fees on Gross Revenues for Solid Waste Collectors

Applicability

Suitable for Entities

State	Collects directly
Cities	n/a
Counties	n/a
Private Sector	n/a

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations			
Capital improvement or equipment			
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--		
Waste prevention			
Litter/illegal dumping cleanup and prevention		--	--
Permitting and enforcement	✓	✓	
Planning and administration			

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Every solid waste collection company regulated by the Washington Utilities and Transportation Commission (UTC) is required to pay a fee of up to 1 percent of gross revenues from solid waste collection to cover the UTC’s costs of supervising and regulating solid waste carriers. Gross operating revenues earned by city-run or city-contracted collectors are not subject to this fee. This mechanism as currently implemented is designed to fund oversight of solid waste collectors (supervision and regulatory activities) by the UTC only. This tax is relatively stable because it is charged on revenues from all waste streams, including recycling and composting.

Potential Adjustments

No need for adjustments was identified. This mechanism provides adequate funding for oversight of regulated solid waste service providers.

Key Criteria

Financial Strength and Stability

Funding base	Gross revenues from regulated solid waste collection
Garbage quantities	Correlated
Total waste quantities	Correlated
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	Neutral
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Social sustainability

Impact on people with lower incomes	Potentially regressive if fees are passed on to customers.
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PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

Washington State Department of Ecology | Funding Mechanisms for Solid Waste

Authorization and Feasibility

Current authorization	RCW 81.77
Feasibility of potential adjustments	Not applicable

Implementation and Other Considerations

- Gross revenues for solid waste collectors are a reasonable proxy for the size and complexity of the solid waste collection system. Because fees are based on revenues, they also self-adjust to some extent for inflation.

Refundable Core Battery Charge

Applicability

Suitable for Entities

State	Authorizes but does not receive revenues
Cities	n/a
Counties	n/a
Private Sector	Collects the charge and retains un-redeemed charges

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations			✓
Capital improvement or equipment			
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--		
Waste prevention			
Litter/illegal dumping cleanup and prevention		--	--
Permitting and enforcement			
Planning and administration			

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Retailers who sell vehicle batteries must charge customers a fee of at least \$5 per battery sold, accept used batteries in exchange (refunding the fee), and recycle used batteries that are accepted. Consumers can reclaim the fee by returning an equivalent battery within 30 days of purchasing the new battery. This mechanism is similar to a bottle deposit in that customers can avoid or recoup the fee paid by recycling the used product. Retailers may keep unredeemed core charges.

In Washington, the state authorizes the core vehicle battery charge, but no money goes to the state or local governments. Fees collected from this program are kept by retailers, who use these funds to pay for recycling of batteries. As a result, the charge is an incentive to recycle but not a true funding mechanism. Recycling by retailers is funded by the commodity value of vehicle batteries.

Some other states, such as Florida and Maine, charge a non-refundable fee in addition to the refundable core charge. Revenues from the non-refundable fee support collection and processing, although retailers are also required to pay for recycling of batteries accepted.

Potential Adjustments

No need for adjustments was identified.

Key Criteria

Financial Strength and Stability

Funding base	Number of new vehicle batteries sold
Garbage quantities	Not correlated
Total waste quantities	Not correlated
Commodity prices	Not correlated



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

Washington State Department of Ecology | Funding Mechanisms for Solid Waste

Environmental sustainability

Recycling, composting, and proper disposal	Positive incentives
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Social sustainability

Impact on people with lower incomes	Mixed or neutral
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Authorization and Feasibility

Current authorization	RCW 70.95.640
Feasibility of potential adjustments	Not applicable

Implementation and Other Considerations

- This incentive is successful in part because recycling by retailers is funded by the commodity value of vehicle batteries.
- Refundable charges could be applied to other products to incentivize recycling or proper disposal, especially for toxic products; however, they would require an additional source of funding to pay for collection and recycling unless the covered products have a high commodity value.

Tire Retailer Fee

Applicability

Suitable for Entities

State	Authorizes and receives 90% of revenues
Cities	n/a
Counties	n/a
Private Sector	Collects the fee and retains 10%

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations		*	
Capital improvement or equipment			
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--		
Waste prevention		*	
Litter/illegal dumping cleanup and prevention	✓	--	--
Permitting and enforcement			
Planning and administration			

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Purchasers are charged a \$1 fee at the point-of-sale per new tire purchased. Retailers retain 10 percent of the fee and submit the other 90 percent to the state’s Waste Tire Removal Account. The fee applies only to motorized vehicle tires, not bicycle or wheelbarrow wheels.

Most funds collected in Washington are used to fund highway maintenance related to road wear. Some portion of revenues are used to provide funding for illegal dumping enforcement, cleanup, prevention activities as well as market development activities related to used tires. Currently, the fund is not actively used for market development efforts related to used tires. Over the 2013–2015 biennium, the State collected \$7.5 million in tire retailer fees, 17 percent of which (\$1.3 million) was allocated to Ecology for statewide waste tire pile clean-up and prevention.¹⁵

Unlike the core battery charge, the tire retailer fee does not provide an incentive for returning the product for recycling. The tire fee lacks an incentive because it is not refunded in exchange for returning used tires and because retailers are not required to pay for recycling used tires.

¹⁵ http://dor.wa.gov/docs/reports/2015/tax_statistics_2015/tax_statistics_2015.pdf



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

Potential Adjustments

A bill (HB 1191) has been proposed in the Washington State Legislature in 2017 to eliminate the tire retailer fee.

Options for improving the sustainability of the tire retailer fee as a funding mechanism for the solid waste system include:

- Increasing the fee and dedicating the increase to illegal dumping enforcement, cleanup, and prevention as well as to market development activities related to used tires.
- Adding a refundable charge on tires (similar to the core battery charge) and requiring tire retailers to accept and pay for recycling one used tire for every replacement tire sold (a form of product stewardship).

Key Criteria

Financial Strength and Stability

Funding base	Number of new tires purchased
Garbage quantities	Not correlated
Total waste quantities	Not correlated
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	No incentives currently (refundable fee with EPR for tires would incentivize recycling)
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Social sustainability

Impact on people with lower incomes	Neutral or minimally regressive
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Authorization and Feasibility

Current authorization	RCW 70.95.510–570
Feasibility of potential adjustments	Moderate to low

Implementation and Other Considerations

- Adding a refundable charge and requiring tire retailers to accept and recycle used tires faces the same political challenges as most extended producer responsibility programs.

State and County Mechanisms

This section describes mechanisms currently used at the state - and county-level in Washington or used elsewhere, along with potential adjustments that could make them stronger or more sustainable funding sources for the solid waste system.

Extended Producer Responsibility Model for Targeted Products

Applicability

Suitable for Entities

State	Could authorize and impose extended producer responsibility
Cities	Could but not likely to authorize or impose extended producer responsibility
Counties	Could authorize and impose extended producer responsibility
Private Sector	Manufacturers and retailers are typically responsible for funding and managing collection and recycling; some work on legislation for EPR for their products (paint and batteries).

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations		✓	✓
Capital improvement or equipment			
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--	✓	✓
Waste prevention			
Litter/illegal dumping cleanup and prevention		--	--
Permitting and enforcement		✓	✓
Planning and administration			

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Note: this mechanism covers EPR for narrow product types (such as mercury-containing lights); a separate mechanism discusses EPR for broad material categories (such as printed paper and packaging).

Extended producer responsibility (EPR) programs for individual products and product categories in Washington State currently cover televisions and computers (E-Cycle Washington) and mercury-containing lights (LightRecycle) at the state level. At least three counties (King, Pierce, and Snohomish) have passed EPR laws regarding pharmaceuticals.¹⁶

Extended producer responsibility programs require manufacturers of covered products to fully fund the cost of collection and recycling and to manage the handling of recovered materials. They also typically include provisions that producers promote the collection program and provide education regarding proper handling of covered materials.

Under E-Cycle and the pharmaceutical stewardship programs, manufacturers choose how to collect funds for their programs. State legislation authorizing LightRecycle requires stewardship organizations

¹⁶ For example, King County’s program is described at <http://www.kingcounty.gov/depts/health/board-of-health/regulations/secure-medicine/overview.aspx>.



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

to propose an environmental handling charge paid by retail customers on the sale of all mercury-containing lights in Washington State.

EPR programs support recycling and proper disposal of covered products by residents and small businesses by making recycling free and reasonably convenient (as defined in authorizing legislation). They shift the financial costs of managing products at the end of their life from consumers and the public sector to product manufacturers. Manufacturer-run programs often contract with and pay private companies or local governments to provide collection and recycling. EPR programs typically include administrative fees paid by manufacturers to fund government oversight.

As long as participating manufacturers meet standards established in product stewardship legislation, they have broad flexibility in how they design their programs. For example, they can choose to use existing public and private waste collection infrastructure, if those public and private entities agree.

Potential Adjustments

Options for improving the sustainability of the product stewardship programs as a funding mechanism for the solid waste system include:

- Expand the pharmaceutical product stewardship program to more counties or consider implementing a statewide program. House Bill 1047, proposed in the 2017 legislative session, seeks to establish a statewide pharmaceutical product stewardship program.
- Apply extended producer responsibility to additional products that present a distinct public health or dumping problem. Products to consider include additional electronic devices, tires, mattresses, appliances, architectural paint, and household hazardous wastes. Bills for a paint stewardship program have been proposed to the state legislature for the past five years— including HB 1376 in 2017; however, none of these proposals has passed at the time of writing.

Key Criteria

Financial Strength and Stability

Funding base	Varies by program, but typically number of and/or weight of covered products sold into the state.
Garbage quantities	Not correlated
Total waste quantities	Not correlated
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	Positive incentives
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Social sustainability

Impact on people with lower incomes	Neutral or minimally regressive, depending on implementation
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Authorization and Feasibility

Current authorization	RCW 70.95N (E-Cycle); RCW 70.275 (LightRecycle) King County Rule and Regulation #13-03 (pharmaceuticals)
Feasibility of potential adjustments	Moderate



Implementation and Other Considerations

- From the state and municipal perspective, EPR is a stable funding mechanism for managing collection, processing, and disposal because it typically requires manufacturers to fully fund these activities for their products, and the funds are not easily redirected to non-waste uses. Because EPR programs may shift both costs and revenues with the waste system, passing new EPR laws typically involves extensive engagement of producers, retailers, and public and private waste-system stakeholders.



Extended Producer Responsibility for General Recyclables Using Canadian or European Models

Applicability

Suitable for Entities

State	Could authorize and impose extended producer responsibility (implemented elsewhere by British Columbia, Ontario, Germany, and others)
Cities	n/a
Counties	n/a
Private Sector	Manufacturers and retailers are typically responsible for funding and managing collection and recycling

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations		*	
Capital improvement or equipment			
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--	*	
Waste prevention		*	
Litter/illegal dumping cleanup and prevention		--	--
Permitting and enforcement		*	
Planning and administration			

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation

Note: this mechanism covers EPR for broad material categories (such as printed paper and packaging), which is not currently used in Washington State; a separate mechanism discusses EPR for targeted product types (such as mercury-containing lights).

Several jurisdictions in Canada and Europe use extended producer responsibility to provide collection and recycling of general recyclables.

In 2014, the province of British Columbia, Canada, implemented an extended producer responsibility (EPR) program on residential packaging and paper products. The EPR program requires producers to take responsibility for the end-of-life management of these materials (collection, processing). Producers are required to submit an annual report on the quantities of packaging and paper products sold and collected and their methodology for collecting and calculating performance data. Producers have broad flexibility in how they meet their responsibilities, which include recovery targets and convenience standards.

Recycle BC (formerly Multi-Material BC), a non-profit, administers the EPR program that most producers in British Columbia have joined to meet their responsibilities. In 2015, Recycle BC achieved a 77% recovery rate for covered materials and reached 97% of households through curbside and self-haul collection. However, an audit of the program identified the following opportunities to improve the program: monitoring of outcomes; addressing lack of competition due to having a single stewardship organization; improving regulatory oversight of producers to ensure complete participation; addressing



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

limited accessibility in remote areas of the province; and improving accountability of stewardship organizations.¹⁷

Producers pay fees to Recycle BC quarterly based on the weight and type of material. In addition to collection and processing, Recycle BC also funds promotion and education costs, program development, research and development for unrecyclable packaging and printed paper, and ongoing operation and administrative costs. Exemptions, simplified reporting, and reduced rates are offered for small and medium-sized producers.

As an alternative EPR model, the province of Ontario, Canada, historically used a system in which producers and municipalities each paid half of the collection and processing costs for the Blue Box program, which provided curbside recycling for covered products. In 2016, Ontario adopted legislation that will require producers to provide all funding for collection and processing.¹⁸

Potential Uses in Washington

Options for using EPR for general recyclables as a funding mechanism for the solid waste system include:

- Adopting an EPR program for packaging, printed paper or other commonly recycled products.

Key Criteria

Financial Strength and Stability

Funding base	Tons of materials covered by the program)
Garbage quantities	Somewhat correlated
Total waste quantities	Somewhat correlated
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	Positive incentives
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Social sustainability

Impact on people with lower incomes	Mixed or neutral
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Authorization and Feasibility

Current authorization	Not applicable
Feasibility of potential adjustments	Low

Implementation and Other Considerations

- From the state and municipal perspective, EPR is a stable funding mechanism for collection and processing because it requires manufacturers to fully fund these activities for their products, and it is not easily redirected to other uses. However, the political feasibility of this approach is

¹⁷ British Columbia Auditor General, “Product Stewardship: An Overview of Recycling in B.C.” (2016), accessed February 2016

(http://www.bcauditor.com/sites/default/files/publications/reports/FINAL_Product_Stewardship.pdf)

¹⁸ Province of Ontario, “Ontario Passes New Waste-Free Ontario Act,” Accessed February 2017

(<https://news.ontario.ca/ene/en/2016/06/ontario-passes-new-waste-free-ontario-act.html>).

low because would it completely change the authority and governing mechanisms for management of a large portion of the waste stream.

- Research has found that EPR is primarily a mechanism for collection and processing of targeted materials rather than a driver of product development shifts. In theory, EPR programs could incentivize participating manufacturers to reduce the fee they pay by creating products that use lighter, easier-to-recycle materials, or (for packaging EPR programs) use less packaging material overall. However, a 2012 study of EPR for consumer packaging by Science Applications International Corporation (SAIC) suggested that price signals by EPR to manufacturers are typically weak and found no evidence that EPR reduced manufacturer packaging use.¹⁹
- California Department of Resources Recycling Recovery (CalRecycle) is considering mandatory policy approaches to promote packaging recycling, including EPR, minimum recycled content requirements, and a landfill ban on recyclables. CalRecycle is convening several panel discussions on EPR for packaging, with work associated with its development anticipated to continue through 2018.

¹⁹ SAIC, “Evaluation of Extended Producer Responsibility for Consumer Packaging,” Accessed March 2017 (https://www.gmaonline.org/file-manager/Sustainability/GMA_SAIC_EPR_Report_091112.pdf)

Advanced Recovery or Disposal Fees

Applicability

Suitable for Entities

State	Yes
Cities	Maybe
Counties	Yes
Private Sector	n/a

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations	*	*	✓
Capital improvement or equipment			
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--	*	✓
Waste prevention	*	*	*
Litter/illegal dumping cleanup and prevention		--	--
Permitting and enforcement	*	*	✓
Planning and administration			

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation

Strictly speaking, Washington does not currently use advanced recovery or disposal fees; however, the Environmental Handling Charge that is required as part of the LightRecycle EPR program could be considered a form of an advanced recovery fee.

With advanced recovery or disposal fees, consumers pay a fee on a product at the point of sale to cover all or some portion of future disposal or recovery costs when that product reaches the end of its life. These fees are targeted to specific types of products and are typically paid per unit of a product purchased. By paying for end-of-life management for the targeted product at purchase rather than at disposal, advanced recovery or disposal fees reduce the financial disincentive for improper disposal by making proper disposal free or low cost. These funds are typically used to cover costs only for the products on which they are levied.

Potential Uses in Washington

Options for using advanced recovery or disposal fees as a funding mechanism for the solid waste system include:

- Apply advanced recovery or discovery fees to specific products that are not regularly accepted in recycling programs, present a distinct public health problem when improperly disposed of, or present a distinct dumping problem. Products to consider include tires, mattresses, appliances, paint, and household hazardous wastes.



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Key Criteria

Financial Strength and Stability

Funding base	Number of covered products sold
Garbage quantities	Not correlated
Total waste quantities	Not correlated
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	Positive incentives
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Social sustainability

Impact on people with lower incomes	Neutral or mixed
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Authorization and Feasibility

Current authorization	RCW 70.275.050 (only covers mercury-containing lights)
Feasibility of potential adjustments	Moderate

Implementation and Other Considerations

- From the state and municipal perspective, extended producer responsibility (EPR) provides more stable funding than advanced recovery or disposal fees because advanced fees may not be set accurately to cover collection and processing costs.
- While counties and cities could implement advanced recovery or disposal fees, they are less effective at a municipal level than at a state level because consumers can avoid the fees by purchasing products outside the municipality even though they will eventually discard the product within the municipality.

County Mechanisms

This section describes mechanisms currently authorized at the county-level in Washington, with examples of counties that currently use them.

Solid Waste Disposal Districts (Excise and Disposal Taxes)

Applicability

Suitable for Entities

State	n/a
Cities	n/a
Counties	Yes
Private Sector	n/a

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations	✓	✓	✓
Capital improvement or equipment	✓	✓	✓
Closed landfill maintenance, remediation	✓	--	--
Education, outreach, technical assistance	--	✓	✓
Waste prevention	✓	✓	✓
Litter/illegal dumping cleanup and prevention	✓	--	--
Permitting and enforcement	✓	✓	✓
Planning and administration	✓	✓	✓

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Counties with a population of less than 1 million have the authority to establish a solid waste disposal district. The district can include all or part of unincorporated areas and any incorporated cities that agree to join the district. Disposal districts work best to fund overall county solid waste activities when cities and the county cooperate to form a district encompassing the entire county. Disposal districts in Whatcom and Lewis counties use revenues to pay for nearly all solid and household hazardous waste activities that are not covered by CPG funding.

Disposal districts have the authority to levy an excise tax on district residents and businesses to fund disposal district activities. State legislation does not prescribe how the tax must be calculated. The Whatcom County Disposal District charges an excise tax of up to \$8.50 per ton on garbage collected by the solid waste collector in the district (Whatcom County Code 8.13.030). The San Juan and Lopez Island disposal districts charge their excise taxes based on customer rates paid to certificated waste collection companies for the collection of solid waste, but not recycling or composting.

Disposal districts are also authorized to collect disposal fees based on weight or volume at disposal sites or transfer station. The Lewis County Disposal District, including the county and its constituent cities, uses a disposal fee at the local transfer station. The county and local cities have adopted flow control ordinances to direct garbage to the transfer station, based on their authority to direct garbage collected within their boundaries (RCW 36.58.040 for counties; RCW 35.21.152 for cities).

Potential Adjustments

Options for improving the sustainability of disposal and excise taxes through solid waste disposal districts as a funding mechanism for the solid waste system include:

- In RCW 36.58.100-150, explicitly rename disposal districts into “materials management” or “solid waste management” districts, signaling the inclusion of all waste streams.

Key Criteria

Financial Strength and Stability

Funding base	Moderate
Garbage quantities	Correlated
Total waste quantities	Somewhat correlated; more correlated if the fee is also on recyclable and compostables
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	Mixed or neutral
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Social sustainability

Impact on people with lower incomes	Regressive, unless low-income discounts are provided
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Authorization and Feasibility

Current authorization	RCW 36.58.100-150
Feasibility of potential adjustments	Moderate

Implementation and Other Considerations

- Three counties in Washington—Lewis, San Juan, and Whatcom counties—have established solid waste disposal districts. Disposal districts are allowed under current law and can provide a strong funding option, particularly when constituent cities agree to participate.
 - Lewis County established a disposal district in 1992, forming agreements with cities in Lewis County to direct all garbage to the county’s transfer station. The district receives tip fees, which pay for transfer station operations, landfill post-closure activities, and solid waste division activities not funded by other sources. The primary motivator for forming the district and controlling the flow of waste was to fund joint remediation responsibilities at the closed Centralia Landfill, a superfund site.²⁰ Other sources of solid waste funding include grants from Ecology, recycling revenues, and funds from other departments for solid-waste-related activities (such as litter clean-up along county-owned roads)
 - Whatcom County Disposal District was formed in 1990. The District charges an excise tax of \$8.50 per ton on garbage collected from residents and by businesses in the district. Through inter-local agreements, the tax is charged on waste collection in both incorporated and unincorporated areas. Whatcom County uses collected funds for overall solid waste management planning, education, and community outreach activities not funded by other sources, such as Coordinated Prevention Grants.²¹

²⁰ Interview with Steve Skinner, Lewis County Solid Waste Services (February 2017).

²¹ Interview with Jeff Hegedus, Whatcom County Solid Waste Management Program (February 2017).



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- San Juan County Disposal District was formed in 1996. The District levies a surcharge on the operator of vehicles delivering loads to disposal sites or transfer stations based on vehicle type. Uses of the solid waste fund include, but are not limited to, the closure of the Orcas Island Landfill; expenses for selection, study, planning for facilities for handling solid waste and recyclable materials; and construction of any County-owned facilities for handling solid waste and recyclable materials.²²
- Whatcom County also has inter-local agreements with constituent cities so all residents and businesses are subject to the excise tax—not just those in unincorporated areas. Lewis County also has inter-local agreements with constituent cities to direct waste to the local waste facility. Counties cited cooperation as key to adequate and sustainable funding, particularly when incorporated areas expand within counties.
- Disposal districts should carefully consider exemptions to disposal or excise taxes before allowing them. In Whatcom County, residents who self-haul their waste are exempt from the excise tax despite receiving benefits from a number of district services, such as household hazardous waste collection, comprehensive planning, and recycling education and outreach. Too many exemptions can reduce the adequacy of these funding mechanisms.

²² San Juan County Code 8.12.160:

<http://www.codepublishing.com/WA/SanJuanCounty/html/SanJuanCounty08/SanJuanCounty0812.html#8.12.160>
(Accessed January 2017)

Solid Waste Management Planning Fees

Applicability

Suitable for Entities

State	n/a
Cities	n/a
Counties	Yes
Private Sector	n/a

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations			
Capital improvement or equipment			
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--		
Waste prevention			
Litter/illegal dumping cleanup and prevention		--	--
Permitting and enforcement			
Planning and administration	✓	✓	✓

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

In Washington, counties can impose a fee on collection services throughout unincorporated areas to pay for administration and planning expenses incurred in complying with state requirements to develop a Solid Waste Management Plan. State legislation does not prescribe a format for these fees.

Franklin County has used this mechanism since 1992 and currently charges a fee of 3% on annual gross revenues for garbage collected by the certificated waste collection company in unincorporated areas.

Potential Adjustments

No statewide need for adjustments was identified.

Key Criteria

Financial Strength and Stability

Funding base	Varies by specific implementation.
Garbage quantities	Varies by specific implementation
Total waste quantities	Varies by specific implementation
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	Mixed or no incentives
--	------------------------

Social sustainability

Impact on people with lower incomes	Neutral or minimally regressive, depending on implementation
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Authorization and Feasibility

Current authorization	RCW 36.58.045
Feasibility of potential adjustments	Moderate



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Implementation and Other Considerations

- Franklin County passed its Solid Waste Collection Service Fee in 1992, establishing an initial fee of 1.1% on annual gross revenue in 1993. The fee was raised to 3% in 1994 and has not been revised since. The fee is authorized under Chapter 8.36 of Franklin County's municipal code. Franklin County uses revenues to fund its 25% Coordinated Prevention Grant (CPG) match as well as planning, implementation, and enforcement of programs related to its solid waste management plan that are not funded by CPG.

County and City Mechanisms

This section describes mechanisms currently authorized at the county- and city-level in Washington, with examples of municipalities that currently use them.

Local Board of Health Fees

Applicability

Suitable for Entities

State	n/a
Cities	Yes (if it has a board of health)
Counties	Yes
Private Sector	n/a

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations			✓
Capital improvement or equipment			✓
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--		✓
Waste prevention			✓
Litter/illegal dumping cleanup and prevention	✓	--	--
Permitting and enforcement	✓	✓	✓
Planning and administration			✓

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Local boards of health have the authority both to enact regulations to protect public health and to establish fee schedules for services they provide. Some boards have used this authority to develop programs, enact rules, and collect fees for moderate risk waste services.

The King County Board of Health has established local hazardous waste management fees to provide funding for hazardous material and waste services provided through the Local Hazardous Waste Management Program (LHWMP) in King County. Services include collection, disposal, education and outreach, waste prevention efforts, enforcement, and planning. In King County, fees are charged to entities that bill for solid waste collection services based on services provided, to transfer station and landfill operators based on number of self-haul customers served and self-haul tons accepted, and to sewage treatment plant operators based on gallons treated.²³

Local boards of health could potentially use this mechanisms to fund other services that protect, preserve, or improve public health, such as cleanup and enforcement of regulations related to litter and illegal dumping or other permitting and enforcement activities related to solid waste.

²³ King County Board of Health Code 11.04.060, <http://www.kingcounty.gov/depts/health/board-of-health/~media/depts/health/board-of-health/documents/code/BOH-Code-Title-11.ashx>

Potential Adjustments

No statewide need for adjustments was identified.

Key Criteria

Financial Strength and Stability

Funding base	Varies based on implementation
Garbage quantities	Varies based on implementation
Total waste quantities	Varies based on implementation
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	Varies based on implementation
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Social sustainability

Impact on people with lower incomes	Varies based on implementation
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Authorization and Feasibility

Current authorization	RCW 70.05.060
Feasibility of potential adjustments	Not applicable

Implementation and Other Considerations

- In 1990, LHWMP in King County was established with approval by a required supermajority of suburban cities, King County, and the City of Seattle. King County had determined that a regional plan would be most appropriate to comply with local hazardous waste planning requirements set out by RCW 70.105.220. The King County Board of Health set the fee structure in 1991, which has since been adjusted periodically. The program cites engaging both internal and external stakeholders and having detailed performance and financial data as keys to its funding success.²⁴
- Most recently in 2015, LHWMP in King County made a revenue-neutral adjustment to the fee on solid waste collection from commercial customers. Instead of a flat charge on all commercial customers, the fee now takes into account solid waste collection service level. LHWMP in King County worked closely with ten solid waste billing entities in the county to develop a fee structure that allocated costs more fairly across customers but was not too complex for the billing entities to calculate and pay. For example, the fee structure currently considers the size but not collection frequency of solid waste containers.²⁵ Different fees are charged for residential customers, commercial customers with containers sized 0.48 cubic yards or smaller, commercial customers with containers larger than 0.48 and smaller than 10 cubic yards, and commercial customers with containers larger than 10 cubic yards).

²⁴ Interview with Liz Tennant, Strategic Advisor in the Office of the Program Director, Local Hazardous Waste Management Program in King County (March 2017).

²⁵ Interview with Liz Tennant, Strategic Advisor in the Office of the Program Director, Local Hazardous Waste Management Program in King County (March 2017).



Mandatory Collection Service Requirements

Applicability

Suitable for Entities

State	n/a
Cities	Yes
Counties	Yes
Private Sector	n/a

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations			
Capital improvement or equipment			
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--		
Waste prevention			
Litter/illegal dumping cleanup and prevention		--	--
Permitting and enforcement			
Planning and administration			

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

No components are marked as funded by this mechanism because mandatory collection service requirements are not a funding source; they provide funding only when used in conjunction with other mechanisms such as collection or tip fees, disposal taxes, or excise taxes.

Current Implementation in Washington

Cities are directly authorized to adopt ordinances mandating the use of solid waste, recycling, and composting collection systems and to establish collection charges. As discussed in other sections, collection charges, surcharges, and related taxes and fees can be used to fund many components of the solid waste system.

Counties that establish a solid waste collection district are authorized to mandate collection within district boundaries. As with solid waste disposal districts, the district can include all or part of unincorporated areas and any incorporated cities that agree to join the district. Collection districts used in conjunction with disposal districts to fund overall county solid waste activities work best when cities and the county cooperate to form districts encompassing the entire county.

Whatcom County has established a collection district that mandates solid waste and recycling collection for all residents and businesses in the county, with a broad exemption for individuals who affirm the y are disposing of their waste in an environmentally sound way (Whatcom County Code 8.11).

Mandatory collection service requirements expand the number of customers with curbside collection and can make the curbside system more efficient as a whole by increasing the density of customers along a given collection route. The increased customer density results in more efficient routing of collection vehicles by reducing distance between customers. However, mandatory collection may not be suitable for very remote areas where adding new customers increases the average distance collection vehicles must travel to collect garbage, recycling, or composting.

Potential Adjustments

No statewide need for adjustments was identified.

Key Criteria

Financial Strength and Stability

Funding base	Not applicable (not a funding source)
Garbage quantities	Not applicable (not a funding source)
Total waste quantities	Not applicable (not a funding source)
Commodity prices	Not applicable (not a funding source)

Environmental sustainability

Recycling, composting, and proper disposal	Positive incentives
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Social sustainability

Impact on people with lower incomes	Not applicable (not a funding source), but a new requirement to pay for collection service could be regressive, unless low-income discounts are provided
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Authorization and Feasibility

Current authorization	RCW 35.21.130 (cities, mandatory collection) RCW 36.58A.010 (counties, mandatory collection) RCW 70.95.090-092 (counties, service level standards) RCW 81.77.030 (certificated waste collection companies to meet minimum service level standards)
Feasibility of potential adjustments	Not applicable

Implementation and Other Considerations

- Jurisdictions should carefully consider exemptions before allowing the m. In Whatcom County, individuals who receive an exemption from mandatory collection are also exempt from the disposal district's excise tax despite receiving benefits from a number of district services, such as household hazardous waste collection, comprehensive planning, and recycling education and outreach. Too many exemptions can leave a disposal district underfunded.
- Mandatory collection, including recycling and composting, does not directly provide funding to local governments but can make curbside systems more efficient. Other benefits to mandatory collection include that it may reduce dumping of regular garbage and increase recycling and composting by ensuring all households and businesses have service. In addition, mandatory collection provides a method (collection accounts) on which to charge fees and taxes to fund solid waste programs (e.g., a disposal district excise tax or a per-account board of health fee).

Residential and Commercial Curbside Collection Rates

Applicability

Suitable for Entities

State	n/a
Cities	Yes
Counties	Yes
Private Sector	Yes

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations	✓	✓	✓
Capital improvement or equipment	✓	✓	✓
Closed landfill maintenance, remediation	✓	--	--
Education, outreach, technical assistance	--	✓	✓
Waste prevention	✓	✓	✓
Litter/illegal dumping cleanup and prevention	✓	--	--
Permitting and enforcement	✓	✓	✓
Planning and administration	✓	✓	✓

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Cities, counties, and the private sector are able to establish rates for collection services where they have authority. Cities that provide municipal collection often use rates to fund city activities beyond collection, transfer, processing, and disposal.

Cities have flexibility in setting collection rate structures through contracting for service or providing municipal collection. Similarly, counties have flexibility in setting collection rates structures if they contract for recycling and composting collection service in unincorporated areas.

Certificated private-sector waste collection companies, who are regulated by the Washington Utilities and Transportation Commission, have greater limitations on setting collection rate structures. In particular, certificated waste collection companies must charge customers strictly for the cost of providing service, plus an allowable rate of return, with variances from the cost of service allowed only to provide discounts for low-income customers at the request of the county in which they operate.

While counties do not have authority to set rate structures for certificated waste collection companies in the private sector, counties do have authority to set service level standards in unincorporated areas, balancing between services and overall costs, and to establish a collection district in order to mandate collection.

Common collection rate structures include:

- Fee-based garbage service with “free” recycling and/or composting. (Note that this structure is not allowed within the current WUTC system.)
- Separate fees for garbage, recycling, and composting with voluntary subscription for recycling and/or composting.

- Separate fees for garbage, recycling, and composting with mandatory subscription to recycling and/or composting (with or without disposal bans).
- Pay-as-you-throw rates for garbage based on the container size.
- Pay-as-you-throw based on frequency of access to containers (typically logged through radio-frequency identification (RFID) key cards). This method is one way to implement pay-as-you-throw in urban areas, multifamily buildings, or other locations where waste containers are typically shared across customers.
- True pay-as-you-throw—pay-as-you-throw by quantity of material disposed and not by subscribed service level—through bag-based or weight-based fees.

Potential Adjustments

Options for improving the sustainability of collection rates as a funding mechanism for the solid waste system include:

- Increase transparency and stability in residential rates on collection service bills by including separate “service charges” that will help cover relatively fixed costs (such as the collection containers, billing services, and driving the collection vehicle to the residence) and “usage fees” that will incentivize waste reduction and recycling and cover variable costs (such as tip fees). Separate service and usage charges are common in other utilities, such as water and electricity.
- Increase transparency in the cost of recycling and composting in residential collection rates by listing rates separately for each service, instead of bundling recycling and composting as “free,” with the costs hidden in garbage rates. To continue promoting the use of recycling and composting services, require customers who subscribe to garbage service to also subscribe to recycling and composting or charge a “combined services” rate that is at least as high as the cost of the equivalent level of garbage service with recycling and composting, indicating to the customer that the rate covers all three services.
- Build “decoupling” of revenues and quantities collected into collection rate adjustment systems, as is used in the electricity sector. For example, when service providers create rates that incentivize waste reduction and recycling, revenues used to maintain the overall collection system may become insufficient if the incentives are more effective than expected. Decoupling can reduce some of this risk. Decoupling first defines how much revenue a collection service provider requires to maintain the system each year, and then it allows rates to rise if waste reduction incentives work better than expected (resulting in a revenue shortfall) or to fall if incentives do not work as planned (resulting in excess revenues).

Key Criteria

Financial Strength and Stability

Funding base	Varies based on implementation, but likely includes customer accounts and account types; types of services provided; and quantities of garbage, recycling, and composting collected.
Garbage quantities	Somewhat correlated
Total waste quantities	Somewhat correlated
Commodity prices	Varies based on whether collection rates take commodity revenues into account



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

Washington State Department of Ecology | Funding Mechanisms for Solid Waste

Environmental sustainability

Recycling, composting, and proper disposal	Positive incentive
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Social sustainability

Impact on people with lower incomes	Regressive, unless low-income rate discounts are provided
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Authorization and Feasibility

Current authorization	RCW 35.21.130 (cities to establish collection charges) RCW 70.95.090-092 (counties to establish service level standards) RCW 36.58.040 (counties to contract for recycling collection) RCW 81.77 (limitations on state-regulated solid waste collectors)
Feasibility of potential adjustments	High to moderate

Implementation and Other Considerations

- Legal authority already exists for all the potential adjustments listed above.
- See *Utility Rate Models: Designing Sustainable Collection Rates* on page 55.

Disposal Tip Fees and Recycling or Composting Processing Fees

Applicability

Suitable for Entities

State	n/a
Cities	Yes
Counties	Yes
Private Sector	Yes

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations	✓	✓	✓
Capital improvement or equipment	✓	✓	✓
Closed landfill maintenance, remediation	✓	--	--
Education, outreach, technical assistance	--	✓	✓
Waste prevention	✓	✓	✓
Litter/illegal dumping cleanup and prevention	✓	--	--
Permitting and enforcement	✓	✓	✓
Planning and administration	✓	✓	✓

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Cities, counties, and the private sector are able to establish tip fees and processing fees for facilities where they have authority. Public and private transfer stations, landfills, incinerators, material recovery facilities, organics processing facilities, and other waste facilities have flexibility in setting tip fees, processing fees, and other fees for using the facilities. Cities and counties with facilities often use tip fee revenues to support all aspects of their solid waste systems.

This section focuses on disposal and transfer facilities that accept garbage, source-separated recycling, and source-separated organics. Many disposal and transfer facilities set different rates based on the materials discarded and the amounts discarded. For example:

- Source-separated recycling and source-separated yard waste are often accepted for free or at a reduced rate as compared to garbage to incentivize source separation.
- Individual items that are bulky (such as furniture, mattresses, or appliances that do not contain refrigerants) or require special handling (such as refrigerators) are often charged a per-item rate to account for additional handling costs compared to regular garbage.
- Self-haul customers bringing a small amount of garbage are often charged a minimum fee, which include a set amount of pounds disposed. In some cases, the minimum fee is the garbage tip fee scaled by the set amount of pounds. In a more sustainable structure, the minimum fee would include the tip fee plus a “gate fee” to charge each customer directly for the costs of providing them service, rather than spreading those costs across all tons accepted by the facility (which overcharges commercial customers and undercharges self-haul customers)

Potential Adjustments

No statewide need for adjustments was identified.



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

Washington State Department of Ecology | Funding Mechanisms for Solid Waste

Key Criteria

Financial Strength and Stability

Funding base	Varies based on implementation, but likely includes customer accounts and account types; types of services provided; and quantities of garbage, recycling, and composting collected.
Garbage quantities	Correlated (for disposal tip fees)
Total waste quantities	Somewhat correlated
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	Positive incentive
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Social sustainability

Impact on people with lower incomes	Regressive, unless low-income rate discounts are provided
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Authorization and Feasibility

Current authorization	RCW 35.21.152 (cities to establish rates and charges for city-controlled solid waste handling facilities) RCW 36.58.040 (counties to establish rates and charges for county-controlled solid waste handling facilities)
Feasibility of potential adjustments	Not applicable

Implementation and Other Considerations

- Not applicable.
- At the local level, jurisdictions should take into account the extent to which current revenues collected from these fees cover related system costs and whether adjustments to the fee schedules are needed.

Solid Waste Facility Permit Fees

Applicability

Suitable for Entities

State	n/a
Cities	Yes
Counties	Yes
Private Sector	n/a

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations			
Capital improvement or equipment			
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--		
Waste prevention			
Litter/illegal dumping cleanup and prevention		--	--
Permitting and enforcement	✓	✓	✓
Planning and administration			

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Solid waste handling facilities operating in Washington State must obtain a permit from their local jurisdictional health departments, such as city and county health departments. At the discretion of the local health departments, some solid waste handling facilities may qualify as permit-exempt. Health departments may establish reasonable fees for issuing and renewing permits. Revenue raised from permitting fees are for enforcement of solid waste handling facility requirements, including permitting.

Permit fees are often based on the staff cost and hours to conduct these regulatory activities and apply to a range of facility types, including transfers stations, landfills, energy recovery facilities and incinerators, compost facilities, recycling and material recovery facilities, waste tire storage, and moderate risk waste facilities. Some jurisdictions, such as the Tacoma-Pierce County Health Department, also charge fees for reviewing applications from facilities seeking permit exemptions and inspecting those facilities to confirm they are eligible to be permit-exempt.²⁶

Potential Adjustments

No statewide need for adjustments was identified, but local governments could adjust or use this mechanism more. Depending on individual circumstances, local health jurisdictions may need to adjust their individual fee structures to be adequate and sustainable. Some may want to follow the Tacoma Pierce County Health Department model of also charging fees for permit-exemptions.

²⁶ Tacoma-Pierce County Health Department, "2017 Fee Schedule," Accessed February 2017 (<http://www.tpchd.org/files/library/8960ab60f7c201d6.pdf>)



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

Washington State Department of Ecology | Funding Mechanisms for Solid Waste

Key Criteria

Financial Strength and Stability

Funding base	Number, size, type, and complexity of solid waste facilities receiving permits
Garbage quantities	Somewhat correlated, depending on permit fee structure
Total waste quantities	Not correlated
Commodity prices	Not correlated

Environmental sustainability

Recycling, composting, and proper disposal	Mixed or no incentives
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Social sustainability

Impact on people with lower incomes	Neutral or minimally regressive
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Authorization and Feasibility

Current authorization	RCW 70.95.180
Feasibility of potential adjustments	Not applicable

Implementation and Other Considerations

- Solid waste facility permit fees are typically adopted by resolutions of the local board of health or other local jurisdictional health department.

Fees in Collection Contracts

Applicability

Suitable for Entities

State	n/a
Cities	Yes
Counties	Yes (for recycling and composting contracts only)
Private Sector	n/a

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations	✓	✓	✓
Capital improvement or equipment	✓	✓	✓
Closed landfill maintenance, remediation	✓	--	--
Education, outreach, technical assistance	--	✓	✓
Waste prevention	✓	✓	✓
Litter/illegal dumping cleanup and prevention	✓	--	--
Permitting and enforcement	✓	✓	✓
Planning and administration	✓	✓	✓

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Cities are authorized to contract for garbage, recycling, and composting service. Cities that contract for collection services have included fees and surcharges in those contracts to pay for solid waste activities beyond contract administration and planning. The fee may be used for city-provided education and outreach, waste reduction, and other waste-related activities.

For example, in the City of Bellevue’s contract, the collector is required to pay a one-time procurement fee to cover the cost of proposal and contract management, an annual contract fee, a one-time fee to cover new education and outreach materials, plus an ongoing fee that may also cover activities beyond contract administration. In the City of SeaTac’s contract, the collector is required to pay a one-time procurement fee, an annual contract fee, and an ongoing franchise fee that may also cover activities beyond contract administration.

Counties have the authority to contract and fix the price for residential curbside recycling and composting in unincorporated areas. Clark County currently contracts for residential recycling and yard waste collection and charges a fee per household on these collection services to pay for contract administration.

Potential Adjustments

No statewide need for adjustments was identified.

Key Criteria

Financial Strength and Stability

Funding base	Varies based on implementation, but typically collection customer accounts or rates
Garbage quantities	Varies based on implementation
Total waste quantities	Varies based on implementation
Commodity prices	Varies based on implementation

Environmental sustainability

Recycling, composting, and proper disposal	Varies based on implementation
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Social sustainability

Impact on people with lower incomes	Regressive, unless low-income rates discounts are provided
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Authorization and Feasibility

Current authorization	RCW 35.21.120 (cities to contract for collection) RCW 35.21.130 (cities to establish collection charges) RCW 36.58.040 (counties to contract for recycling collection)
Feasibility of potential adjustments	

Implementation and Other Considerations

- Contracting for collection services works best when multiple waste collection companies compete for the contract. If there is no competition because only one collection company is interested in the contract, then mandatory collection or a service level standard requiring recycling service would be easier for the county because the WUTC would provide oversight on rates. Contracting without competition would require the county to independently assess whether the proposed rates are fair, a task at which the WUTC is very experienced.

Embedded Services in Collection Contracts

Applicability

Suitable for Entities

State	n/a
Cities	Yes
Counties	Yes
Private Sector	Yes (provide the services)

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations	✓	✓	✓
Capital improvement or equipment			
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--	✓	✓
Waste prevention	✓	✓	✓
Litter/illegal dumping cleanup and prevention	✓	--	--
Permitting and enforcement			
Planning and administration			

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Cities are authorized to contract for garbage, recycling, and composting service. Cities that contract for collection services have embedded other service requirements into their contract, such as requirements to provide education and outreach to customers, collect moderate risk waste, and collect litter. The range of activities that embedded services cover is more limited than the range that fees in collection contracts cover since some solid waste work may be completed only by the city. For example, a city may include a fee in the contract to fund city-provided contract administration and solid waste planning, but a city is unlikely to request that the collection company provide these services on behalf of the city. Cities may use both fees and embedded service requirements in the same collection contract.

For example, in Bellevue, the contracted collector is required to provide education and outreach to customers as well as litter collection services. In City of SeaTac, the contracted collector is similarly required to provide education and outreach to customers and to provide curbside collection of used motor oil that is properly packaged.

Counties have the authority to contract and fix the price for residential recycling and composting in unincorporated areas. Clark County currently has a contract for residential recycling and yard waste collection, which includes providing education and outreach related to recycling and composting.

Contracted service providers may cover the cost of these additional services by incorporating them into customer subscription rates.

Potential Adjustments

No statewide need for adjustments was identified. Local jurisdictions can use these mechanisms as authorized in state law.



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

Washington State Department of Ecology | Funding Mechanisms for Solid Waste

Key Criteria

Financial Strength and Stability

Funding base	Varies based on implementation, but typically collection customer accounts or rates
Garbage quantities	Varies based on implementation
Total waste quantities	Varies based on implementation
Commodity prices	Varies based on implementation

Environmental sustainability

Recycling, composting, and proper disposal	Varies based on implementation
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Social sustainability

Impact on people with lower incomes	Regressive, unless low-income rates discounts are provided
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Authorization and Feasibility

Current authorization	RCW 35.21.120 (cities) RCW 36.58.040 (counties)
Feasibility of potential adjustments	Not applicable

Implementation and Other Considerations

- Embedding services in solid waste contracts requires municipal oversight to ensure the provided services meet the jurisdiction’s expectations but can also create a reliable source of funding that is not a tax.



Commodity Revenues and Revenue-Sharing Agreements

Applicability

Suitable for Entities

State	n/a
Cities	Yes, via contract provisions for commodity rebates
Counties	Yes, via revenue-sharing agreements with certificated waste collection companies
Private Sector	Yes, via contracts with cities or revenue-sharing agreements with certificated waste collection companies

System Component Funded	Garbage	Recycling/Organics	MRW
Collection, transfer, processing/disposal operations		✓	
Capital improvement or equipment		✓	
Closed landfill maintenance, remediation		--	--
Education, outreach, technical assistance	--	✓	
Waste prevention		✓	
Litter/illegal dumping cleanup and prevention		--	--
Permitting and enforcement			
Planning and administration		*	

Notes: Symbols indicate (✓) current uses and (*) potential uses with adjustments; (--) indicates not applicable.

Current Implementation in Washington

Recyclable and organic materials that are collected can be marketed and sold as recycled feedstock for production of new materials or soil amendments. Collectors of these materials (jurisdictions or private waste collection companies) can generate revenues from sale of these commodities, when market conditions are favorable. Volatile commodity prices make commodity revenues an unstable source of funding, even in areas with ready access to recycling markets. Commodity revenues may be smaller in areas with limited access to recycling markets, such as Eastern Washington.

Cities that contract for recycling or composting collection can include provisions for revenue sharing or commodity rebates in their contracts. Counties that contract for recycling or composting may be able to include similar provisions.

Typically, certificated waste collection companies regulated by the Washington Utilities and Transportation Commission are required to rebate recycling commodity revenues to recycling customers with a “commodity credit” line item on customer bills. As an alternative, Washington State also authorizes certificated waste collection companies to retain up to 50 percent of these revenues if they are spent on activities that promote and increase recycling and are approved by the appropriate local government authority. King, Pierce, and Snohomish counties all have revenue-sharing agreements with WUTC-certificated waste collection companies, typically using revenues within two years of collection.

Snohomish County projects funded by revenue-sharing agreements included designing elementary school curricula on recycling and food scrap collection, developing Spanish-language recycling campaigns aimed at increasing participation in multilingual areas of the county, improving online materials about collection services, conducting waste-free cooking demonstrations, and researching and



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

implementing multifamily outreach best practices.²⁷ Waste collection companies in King County have revenue-sharing revenues for similar activities, and Pierce County waste collection companies have used a portion of revenue-sharing revenues to pay for Pierce County sustainability staff.²⁸

Potential Adjustments

Options for improving the sustainability of revenue-sharing agreements as a funding mechanism for the solid waste system include:

- Allow certificated waste collection companies to retain 100 percent of commodity revenues to fund programs that increase recycling and are approved by the appropriate local government.
- Because these revenues are an unstable source of revenue due to commodity fluctuations, modulate these fluctuations by developing plans for longer periods (such as five or ten years) that would allow collection companies and counties to retain a portion of revenues from a year when commodity prices are high to use in future years when prices are low. If commodity prices remain high for a long period, the collection companies would return excess to customers. Although most plans are currently for two years, state law does not prohibit plans for longer periods.

Key Criteria

Financial Strength and Stability

Funding base	Quantity of recyclable material collected and commodity prices
Garbage quantities	Not correlated
Total waste quantities	Somewhat correlated
Commodity prices	Correlated

Environmental sustainability

Recycling, composting, and proper disposal	Neutral
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Social sustainability

Impact on people with lower incomes	Mixed or neutral
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Authorization and Feasibility

Current authorization	RCW 35.21.120 (cities to contract for collection) RCW 35.21.130 (cities to establish collection charges) RCW 81.77.185 (certificated waste collection company and county to establish revenue-sharing agreements) RCW 36.58.040 (counties to contract for recycling collection)
Feasibility of potential adjustments	Moderate

Implementation and Other Considerations

- Due to their volatility, commodity revenues are not a stable source of year-to-year funding.

²⁷ Waste Management Recycling and Commodity Revenue Sharing Plan for Snohomish County: December 1, 2011-August 31, 2012. https://fortress.wa.gov/ecy/swicdocs/docs/resources/20130715091746_1_WM_RSA_12-1-2011_thru_8-31-2012_Extension_No_1_6-28-2012.pdf.

²⁸ Washington Utilities and Transportation Commission Dockets TG-152169 and TG-120073



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

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- Collection companies cannot retain commodity revenues without a county-approved plan to use them; however, state law does not specify a maximum period for these plans, so revenue-sharing agreements could be created for five- or ten-year periods.
- Though a potentially volatile funding source, counties that have used revenue-sharing agreements—King, Snohomish, and Pierce—have benefited from these agreements. In particular, revenue-sharing agreement revenue can be used to fund special research and pilot studies to promote resident recycling education for which there may not have been funding otherwise.

Utility Rate Models: Designing Sustainable Collection Rates

FCS GROUP, with review from Cascadia, considered rate structures across multiple utilities—including water, sewer, stormwater, electricity, and solid waste collection utilities—to determine how rate design can increase funding stability. Rate design involves establishing pricing structures to cover utility costs, which first requires determining utility costs. Rate design can also consider other objectives, such as influencing customer behavior to conserve natural resources.

Utility Revenue Requirements and Rate Design

To set appropriate rates, utilities and waste collection companies commonly conduct cost-of-service studies. These analyses determine how much it costs the utility to provide service to a particular customer group, such as to single-family residential garbage customers, multifamily residential recycling customers, or commercial organics customers. Cost-of-service studies consider specific cost drivers, such as resources needed to provide customer support or education, the expense of collection trucks driving to pick-up and drop-off locations, and the cost of paying tip fees or processing fees. They also typically include estimates regarding the number of customers and their level of usage of utility services. The result of the cost-of-service study is a revenue requirement—that is, the amount of revenue that needs to be recuperated from the customer group to recover the utility's costs (and a fair return for private service providers).

Rate design then shapes the rates to meet the revenue requirement. Rate design is conducted for each customer group, resulting in a set of rate schedules that outlines the fees that each customer group will pay. The rate design and the resulting rate schedules involve setting charges in two key categories:

- **Service charges** (also known as a basic charges, fixed charges, or customer charges): a flat charge that is conceptually related to the fixed costs a customer imposes on the utility, such as customer service or education.
- **Usage charges** (also known as variable rates): a charge based on quantities of resources consumed or disposed. Usage charges can be structured to be more or less expensive as total usage increases. Rate structures that increase prices with usage are called inclining block rates, while rates that decrease prices with usage are called declining block rates.

While waste utilities in Washington may have rate designs that include both types of charges, customers are typically presented a single charge that appears to be a usage charge (because it varies by container size or collection frequency). Other utilities, including water and electricity, usually include both service charges and usage charges, where customer bills separately show charges associated with each of these categories. In addition, some waste utilities in Washington present charges as being based entirely on quantities of garbage service; that is, they do not present separate charges for recycling or composting service.

To provide adequate funding, rate design must be developed to meet the revenue requirement. That is, the rates must be designed to provide the utility a specific amount of revenue from a customer group at the time the rates are set. If revenue falls short of the requirement, the utility could become insolvent.

Rate Design and Revenue Stability

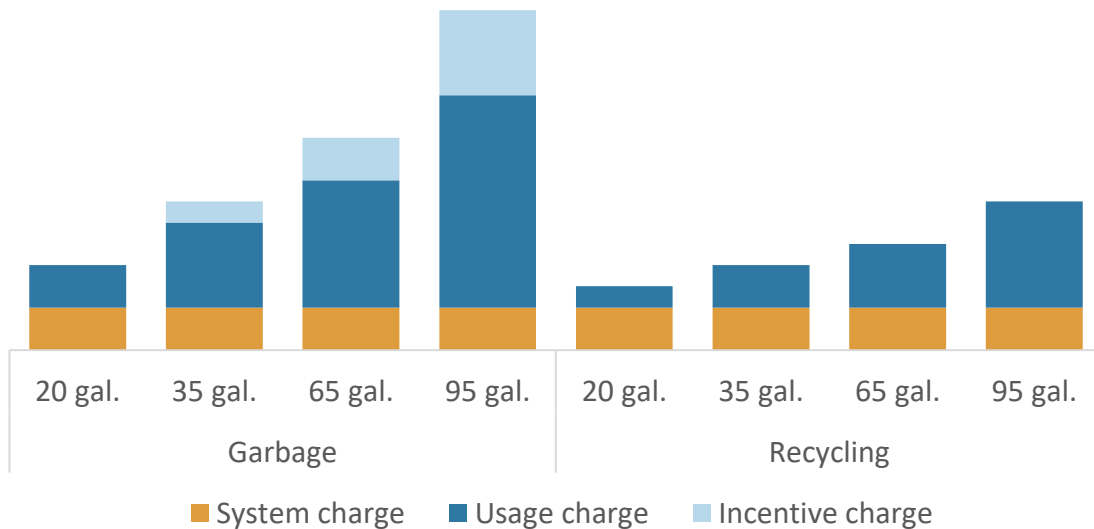
Given that rates are designed to meet the revenue requirement, the specific rate design adopted by the utility is typically based on two competing considerations: revenue stability to utilities over time and price signals to incentivize customer behavior. These competing considerations materialize in the balance of cost recovery achieved through system charges (stability) versus usage charges (incentives).

When determining rate structures, utilities do not necessarily set system charges to cover all fixed costs and usage charges to cover only variable costs. While this rate-setting method would ensure stability through high system charges, it may provide little incentive for resource conservation due to low usage charges. Instead, utilities commonly recover some portion of fixed costs through usage charges to amplify the incentive for resource conservation.

In solid waste rate structures, it is also common to amplify the incentive for resource conservation by recovering some or the entire portion of recycling or composting costs through garbage rates. However, when customers respond to the incentive to reduce garbage usage, the utility may fail to recover sufficient charges to cover all utility revenues.

Figure 1 presents a visual example of a rate structure with system charges for all service types, usage charges, and incentive charges on larger garbage service levels to create an inclining block structure that incentivizes waste reduction and recycling. On a customer bill, these incentive charges would be folded into the usage charge. *Please note that the example rate structure is for explanatory purposes only and does not represent a recommended balance between charge types or rates for various services.*

Figure 1. Example of Rate Structure with System Charges, Usage Charges, and Incentive Shifts



There are three primary strategies (often used in combination) for addressing fixed cost recovery to create sustainable rate structures:

1. **Designing rates that align cost drivers with cost recovery.** Revenues are most stable when cost recovery aligns with cost drivers. For example, costs associated with being a customer—such as customer service, billing, and education—do not vary with the quantities of resources

consumed or disposed. Therefore, rate structures that recover fixed costs through system charges will ensure adequate and stable cost recovery as a reduction in revenue is always associated with a corresponding reduction in cost. The primary drawback to this approach is that it can severely lessen conservation incentives, especially for utilities with low variable costs. For residential customers, variable cost based on tons of waste generated is typically a small part of the overall cost of service.

- 2. Anticipating a customer group's response to price signals.** When using rate schedules that amplify incentives by shifting some portion of fixed costs to the usage charges, utilities must estimate customer's responses to price incentives to ensure overall revenues will still cover overall costs. For example, if the utility estimates that customers will reduce their garbage collection service level by one cart size for every 10% increase in price, it can build these assumptions into its revenue model and rate design. However, underestimating responses can result in critical revenue shortfalls. Given the limited availability of data regarding customer responses to price changes, utilities need a third strategy to address the uncertainty in customer responses to incentives.
- 3. Developing rates that are dynamic over time.** Some utilities, such as electric utilities, have developed rates that address the uncertainty of customer response to rates that incentivize conservation by "decoupling" utility revenues from the amount of the natural resource sold to customers. For example, in a revenue-decoupled utility, rates are established in the first year with the best possible understanding of customer response to incentives. If overall revenues are lower than expected because customers used fewer resources than expected—either because they respond more strongly to incentives or because an economic recession reduces consumption—then the following year's rates automatically increase to incorporate the revenue shortfall from the previous year and return the lost revenue to the utility. Conversely, if the utility's customer responses or market conditions cause customers to consume more resources than expected, the excess revenue that the utility generates is subtracted from the following year's revenue requirement through lowering rates. In this way, decoupling revenues from consumption overcomes the risk of revenue shortfall in the event that rates incentivizing conservation work too well.

Once the balance of cost recovery is determined in terms of service charges and usage charges for a waste utility, it is important to consider how to structure usage charges across the garbage, recycling, and composting streams. To provide incentives for recycling and composting, utilities will want to make garbage service more expensive compared to the recovery streams (recycling and composting). Additionally, the utility may want to provide strong incentives to reduce garbage by using an inclining block structure for garbage (where each additional unit of garbage service costs more than previous units). As customers shift waste to recycling and composting streams, utilities may consider providing moderate incentives to reduce total waste generation with a flat or declining block structure for recycling and composting (that is, additional units of recycling or composting service incur additional costs, but at a rate equal to or less than previous units). The resulting rate structure would therefore provide incentives to recycle instead of disposing of materials, where possible, while still encouraging customers to produce less waste.

Additionally, jurisdictions may want to consider mandatory subscription if they are concerned about customers opting out of recycling and organics service once those costs become visible to customers.

Appendix 1: List of Funding Mechanisms in Database

Information on all these funding mechanisms is available in the Database of Detailed Funding Mechanism Descriptions (Appendix 3)

Funding Mechanisms Currently Used in Washington State

Mechanism Name

Hazardous Substance Tax (Washington State)
Coordinated Prevention Grants (cities and counties across the state)
Solid Waste Collection Tax (Washington State)
Voluntary Reduction Plan Fee (Washington State)
Hazardous Waste Generation Fee (Washington State)
Litter Tax (Washington State)
Fees on Gross Revenues for Solid Waste Collectors (Washington Utilities and Transportation Commission)
Enforcement penalties for littering and illegal dumping (Washington State and local governments)
Permit Fees for solid waste handling facilities (local governments)
Excise Tax via Solid Waste Disposal District (Counties in Washington State)
Local Hazardous Waste Fee (boards of health in Washington State)
Administrative Fees, Franchise Fees, Surcharges, Other Fees, or Embedded Services in Collection Contracts (Washington State cities and counties)
Administration and Planning Fees Outside Collecting Contracts (Washington State counties)
Performance Fees on Solid Waste Contracts (Washington state cities and counties)
E-Cycle Washington EPR Program (Washington State)
LightRecycle EPR Program (Washington State)
Enhanced Producer Responsibility for Pharmaceuticals (Washington State counties)
Core Vehicle Battery Charge (Washington State)
Tire Retailer Fee (Washington State)
Tip Fees (transfer and disposal facility operators)
Flow Control Measures (jurisdictions in WA state)
Curbside Collection Fees (variant: fee-based garbage service with "free" recycling and/or composting)
Curbside Collection Fees (variant: separate fees for garbage, recycling, and composting with voluntary subscription to recycling/composting)
Curbside Collection Fees (variant: separate fees for garbage, recycling, and composting with mandatory subscription to recycling/composting)
Sales of Recyclable Commodities, Compost, or Organic Products (processing facility operators)
Revenue-sharing Agreements with Haulers (Washington counties and cities)
Energy Recovery, Landfill Gas, Biogas, Waste to Energy, and Refuse-Derived Fuel (facility operators)
Hazardous Substance Tax (Washington State)

Funding Mechanisms Used Outside of Washington State

Mechanism Name

Curbside Collection Fees (variant: True pay-as-you-throw through bag fees) (Decatur, Georgia; jurisdictions in Massachusetts; jurisdictions in Europe)
Curbside Collection Fees (variant: pay-as-you-throw through RFID-access containers) (Germany, South Korea)
Curbside Collection Fees (variant: True pay-as-you-throw through weight-based fees) (jurisdictions in Denmark, Sweden, elsewhere in Europe.)
EPR: Levy on Paper and Fiber (Netherlands)
EPR: Green Dot for Packaging (Germany, many other countries)
EPR: Printed Paper and Packaging Ordinance (British Columbia, Canada)
EPR: Other Materials (British Columbia, Canada)
EPR: Ontario Blue Box Program (Ontario, Canada)
EPR: Bottle Bill or Beverage Container Deposit Law (Oregon, Michigan, other jurisdictions)
EPR: Bottle Bill with a Recycled Materials Processing Fee (California)
Advanced Recovery or Disposal Fees (various products)
Sales Tax (Delaware County, New York; Delaware County, Oklahoma; Michigan [proposed only])
Event-specific Sales Tax (Michigan DEQ [proposed only])
Solid Waste Fee on Property Tax Bills (Auckland, New Zealand; Kootenai County, Idaho; and others)
Property Tax / Mill Levy (several counties in Pennsylvania; previously in Boulder County, Colorado)
Variable Fees on Property Tax Bills (Italy)
Real Estate Transfer Taxes (also called Real Estate Excise Taxes) (New York)
Development Impact Fee / Solid Waste Impact Fee (jurisdictions in California; Candia, New Hampshire; Brunswick, Maine)
Trash Tax (City of Boulder, Colorado)
Sales of Energy from Organics Processing (JC-Biomethane, Oregon; Central Ohio BioEnergy, Ohio)
Revenue from Sales of Carbon Credits or Renewable Energy Credits (Massachusetts, New York)
Zero Waste Vendor Non-Compliance Fee (City of Boulder, Colorado); Zero Waste Plan Fee and Refundable Deposit (Boulder County, Colorado [proposed only])
Franchise Fee with a Discount for Higher Diversion Rates (Elk Grove, California; Thousand Oaks, California)
Penalty Surcharge for Disposing of Garbage Loads that Contain Recyclable Materials at Landfill or Other Disposal Sites (Metro Vancouver, Canada)
Clean Community Fee / Environmental Fee (Austin, Texas; San Antonio, Texas)
Landfill Tax (several U.S. states and European countries)
Per-ton Permit Fees (Oregon)
Solid Waste Orphan Account/Orphan Site Fees (Oregon)
Cigarette Butt Tax (San Francisco, California)

Appendix 2: Definitions of Funding Mechanisms Research Fields in Database

Table 1. Funding Mechanism Database Fields

Database Field	Description
Overview	
Mechanism name	Formal name of the mechanism (or if common name, if applicable).
Mechanism short description	Short description of the mechanism, including an overview of who pays, on what basis, and for what end use.
Data sources	Websites, reports, or other references used to obtain information about the funding mechanism.
Who pays?	<p>Indicates which of the following pays either indirectly or directly under the funding mechanism:</p> <ul style="list-style-type: none"> • Consumer (at purchase) • Disposer (during disposal) • Collector/collection company/processor/facility • Manufacturer/retailer • Other (describe) <p>For example, curbside collection fees are an example of a funding mechanism that is paid directly by the disposer.</p>
Funding type	<p>Categorize the funding mechanism type as one of the following:</p> <ul style="list-style-type: none"> • User fee • Extended Producer Responsibility (EPR) or product stewardship program • Other waste-related fee (including permits) • Waste-related tax • Excise, sales, or manufacturing tax/fee • Commodity sales • Enforcement fine/penalty • Grants and loans Non-waste funds
Who is using the mechanism?	
Jurisdictions where used and applicability of the mechanism (list)	<p>Example list of jurisdictions where the mechanism is used. In addition, specify:</p> <ul style="list-style-type: none"> • The region where used: Western Washington, Eastern Washington, another U.S. state, outside of the United States • The population size category of jurisdictions where used: large (greater than 250,000 residents), medium (50,000 to 250,000), and small (less than 50,000)
Example entities (descriptive)	Description of the entity (e.g., city, waste collection company) that uses the mechanism, including partners, if applicable.

Table 1. Funding Mechanism Database Fields

Database Field	Description
Applicability of mechanism	<p>Description of the applicability of the mechanism by the following:</p> <ul style="list-style-type: none"> • Urban, rural, or both • Type of entity (city, county, state, collector, processing facility, retailer/manufacturer, other)
Components funded	
Waste streams funded	<p>Notes whether the mechanism funds garbage, recycling, organics processing, or moderate risk waste. For each funded waste stream, indicates whether the majority of funding from the mechanism is used on that waste stream (“primary”) or not (“secondary”).</p>
System components funded	<p>Notes which of the following system components the funding mechanism supports:</p> <ul style="list-style-type: none"> • Collection, transfer, transport, disposal, and processing • Capital improvements and equipment (or debt service for financed purchases) • Operations, maintenance, or monitoring of active facilities (active landfills, other disposal sites, recycling, composting, and moderate risk waste facilities) • Monitoring, maintenance, and remediation of inactive facilities (e.g., closed landfills) • Education, outreach, or technical assistance • Waste reduction programs • Litter/illegal dumping clean-up and prevention • General administration and planning • Permitting and enforcement • Other expenditures (such as the Public Works Trust Fund, city taxes, or the general fund) <p>For each funded system component, indicate whether the majority of funding from the mechanism is used on that system component (“primary”) or not (“secondary”).</p>
Pass-through funding (if any)	<p>Note pass-through funding, if any. For example, the Washington State Hazardous Substance Tax is deposited into various accounts managed by the state, such as the Local Toxics Control Account, before being distributed to end uses such as through Coordinated Prevention Grants that local governments use to fund their recycling, composting, moderate risk waste, and enforcement activities.</p>
Financial strength and stability	

Table 1. Funding Mechanism Database Fields

Database Field	Description
Funding base	A description of the unit on which the funding mechanism is based. For example, curbside collection fees are based on the number of customers, frequency of collection, and (depending on the rate structure) the volume of garbage collected. Other examples of funding bases include property square footage, business revenue, and number of permitted landfills.
Funding base level	A qualitative assessment of the size (narrow, moderate, or broad) of the funding base. In general, a funding mechanism that can apply to the general population (e.g., a property tax applied on all households) is broad, while a mechanism that applies to only a subset of materials or a small number of customers is narrow.
Correlation of the funding base in relation to...	<p>Indicates whether the funding base is correlated, somewhat correlated, or not at all correlated to each of the following:</p> <ul style="list-style-type: none"> • Garbage quantities • Total waste quantities (including composting and recycling) • Commodity prices <p>“Correlated” means the funding base increases or decreases directly in proportion to changes in the other variable; “somewhat correlated” indicates that the funding base is likely to increase or decrease with the other variable, but the relationship is not as direct; and “not correlated” means that the funding base is not affected by changes to the other variable.</p>
Adequacy for purpose	A description of the adequacy of the funding mechanism for the system components it is intended to fund. Adequacy is based on both the <i>strength</i> (amount of funding available) and <i>stability</i> (consistency despite changes in garbage quantities, waste generation, and commodity prices) of the funding mechanism.
Dedication of the source to solid waste	Indicates whether the funding mechanism is fully or partially dedicated to the solid waste system. The funding mechanism is considered fully dedicated if legislation enabling the funding source specifies that a set amount or portion of the funding must go to the solid waste system. Partially dedicated indicates that the waste system is listed in legislation as a recipient of funding but that the amount of the allocation is not defined.
Environmental and social sustainability	
Environmental sustainability	<p>For each mechanism, categorizes whether the mechanism supports environmental sustainability as one of the following: incentive, no impact, disincentive, or mixed. Includes a description of how and what the mechanism incentivizes, such as:</p> <ul style="list-style-type: none"> • Recycling, organics processing, and waste prevention • Proper waste disposal; not littering or dumping • Feedback to manufacturers (e.g., incorporating end-of-life costs) • Other environmental standards



PART 2. IDENTIFY POTENTIAL FUNDING MECHANISMS

Washington State Department of Ecology | Funding Mechanisms for Solid Waste

Table 1. Funding Mechanism Database Fields

Database Field	Description
Equity, environmental justice, and social justice	<p>A description of the impact of the mechanism on equity, environmental justice, and social justice. Elements to consider for each mechanism include:</p> <ul style="list-style-type: none"> • Who pays under this mechanism, and is the burden on those who are able to pay and those who benefit fairly? • Are there different costs and impacts to urban versus rural customers, or to where the material to be disposed vs. where it was generated? • Does this mechanism have geographically disproportionate impacts on the prevalence of littering, illegal dumping, or toxic wastes disposed?
Feasibility	
Administrative complexity	<p>A rating of the administrative complexity as high, moderate, or low. In general, factors that add complexity include the need for tracking and reporting systems, the method by which material fees are assessed, and how and from whom payments are collected.</p> <p>Include notes that provide context for the administrative complexity rating; in particular, indicate what particular elements of the funding mechanism either add to or reduce complexity.</p>
Feasibility	<p>A rating of the feasibility of implementing a mechanism as high, moderate, or low.</p> <p>Include notes that provide context for the feasibility rating related to political and technical considerations, particularly which elements of the funding mechanism are likely to face political or technical barriers. For mechanisms that are already in place across Washington state, the feasibility rating is noted as “high” since no additional work is needed to implement the mechanism.</p>

Appendix 3: Database with Detailed Descriptions of Funding Mechanisms

This appendix is presented in a separate spreadsheet database.

Appendix 4: Utility Funding Mechanisms

This appendix is presented in a separate memorandum.