

Chapter 4 - Alternative Funding Models

Local Government Funding for Solid Waste in Washington State

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[Publication 23-07-044 -Chapter 1 - Summary and Recommendations - Local Government Funding for Solid Waste in Washington State](#)

[Publication 23-07-045 -Chapter 2 -Current Funding Types - Local Government Funding for Solid Waste in Washington State](#)

[Publication 23-07-046 -Chapter 3 - Core Services - Local Government Funding for Solid Waste in Washington State](#)

[Publication 23-07-048 -Chapter 5 - Fiscal Impacts - Local Government Funding for Solid Waste in Washington State](#)

[Publication 23-07-049 -Appendices - Local Government Funding for Solid Waste in Washington State](#)

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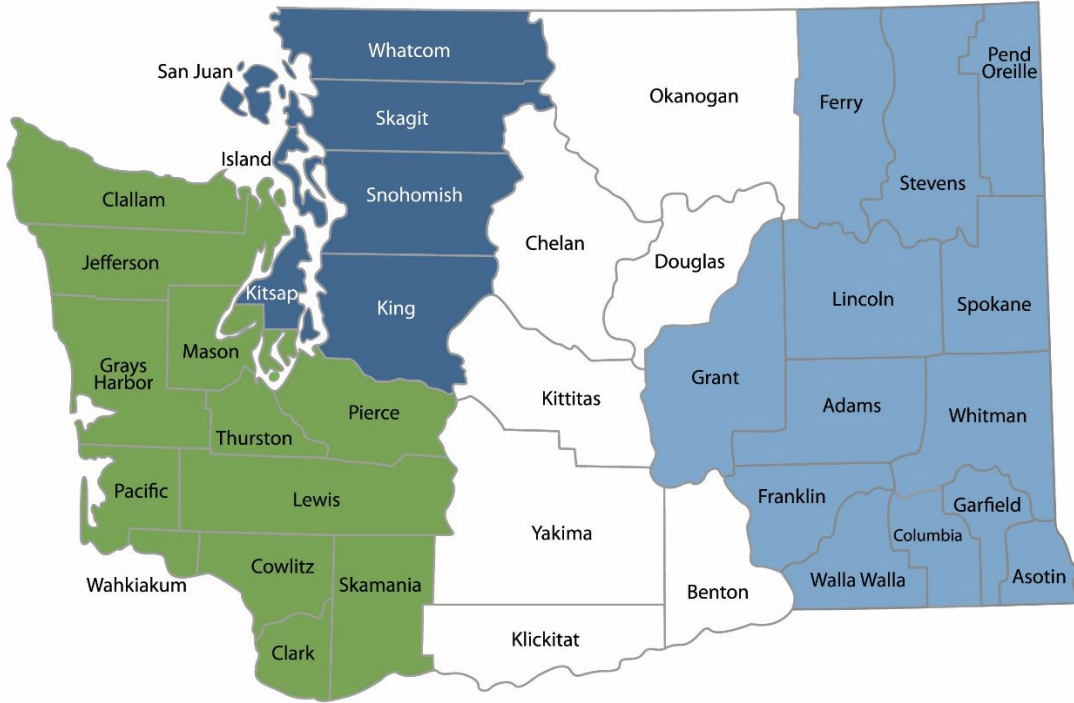
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Department of Ecology's Regional Offices

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Southwest Region 360-407-6300	Northwest Region 206-594-0000	Central Region 509-575-2490	Eastern Region 509-329-3400
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Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	P.O. Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 West Alder Street Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 North Monroe Spokane, WA 99205	509-329-3400
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Background & Purpose

Section 104 of Washington's Organics Management Law directs the Washington State Department of Ecology (Ecology) to contract with a third-party consultant to conduct a study of the adequacy of local government solid waste management funding. The law requires the study to include options and recommendations to provide funding for solid waste programs in the future if significant statewide policy changes are enacted. This study fulfills the law's requirements and serves to inform the legislature, Ecology, and interested parties across the state of Washington on the relative impact of existing and proposed policies on local solid waste system costs and revenues.

The Project Team was led by **Resource Recycling Systems (RRS)** and included **Cascadia Consulting Group** and **FCS Group**. The study began in October 2022 and ended in June 2023 and resulted in five independent yet complementary reports:

- **Chapter 1** provides a **Report Summary** of all four components of the study and the range of research and findings that resulted from the research. Chapter 1 also contains the set of **Recommendations** that are based on the findings and the contract team's collective expertise in materials management, policy, and analysis.
- **Chapter 2** reviews the **Current Funding Types** that state and local governments are currently authorized to use for solid waste management activities, summarizes current solid-waste-related expenditures by state agencies, and outlines the results of a web-based survey of local governments to learn about solid waste funding types and their rate of adoption.
- **Chapter 3** is an analysis of **Core Services Funding Needs** and is based on a service model developed to improve the solid waste management system in Washington with the aim of ensuring that a set of core services are both operating and available to all residents of each county in Washington.
- **Chapter 4** discusses **Alternative Funding Models** that are in use or have been proposed in other parts of the United States and across the world that may have relevance in Washington.
- **Chapter 5** evaluates the **Material Flow, Service Level, and Cost to City and County Solid Waste Systems** of twenty-three (23) policies that have been considered or enacted by the Legislature between 2019 and 2022.

Chapter 4 includes a discussion and application of alternative funding sources that have been proposed or enacted in other states or countries. While it explores alternative models, this section does not model specific budget impacts for Washington State. The study considers alternative funding models



utilized by publicly managed solid waste programs in other states or countries that may be relevant to Washington. The alternative funding models discussed here may have applicability to one or more of the Legislature's goals to:

- Reduce the quantity of organic waste to landfills.
- Manage products through product stewardship or extended producer responsibility programs.
- Improve or install new or updated methane capture systems.
- Increase postconsumer recycled content requirements for materials collected in solid waste programs; and
- Other related proposals that may impact solid waste funding resources.

Comparison to 2017 Funding Study

A similar report, *Funding Mechanisms for Solid Waste*, was commissioned in 2017 by Ecology and completed by Cascadia Consulting Group.[1] The report explored funding authority at various levels of government and detailed several recommendations for both statewide and local funding mechanisms. These methods may be serviced by the state (e.g., a state tax), or other entities that offer statewide services (e.g., extended producer responsibility). While many of the recommendations in the 2017 report have not been pursued, they are still relevant and offer important policy measures to consider or reconsider.

Existing statewide funding mechanisms are described in Table 1.

Table 1. Statewide Funding Mechanisms

Statewide Funding Mechanism	Function
Solid Waste Collection Tax (SWCT)	The SWCT is a 3.6% excise tax on collection charges for solid waste disposal. It 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.
Hazardous Substance Tax (HST)	The HST is a 0.7% tax on the wholesale value of taxable hazardous substances (petroleum products, pesticides, and certain chemicals) that is levied on the first possessor in Washington State.
Litter Tax	The Litter Tax is an excise tax of 0.015% on the value of products deemed likely to become litter. Examples of taxed products include fast food packaging, tobacco products, soft drinks, beer and wine, newspapers, and containers made from various materials. The taxable products list has not been adjusted since the law was first created in 1971.
Extended Producer Responsibility (EPR)	EPR programs require manufacturers and importers of specific products or packaging to fund the cost of collection and recycling and to manage the handling of recovered materials. They shift the financial costs of managing products or packaging at the end of their useful life from individual disposers and the public sector to the producers of the product or packaging.

Two new funding mechanisms have been added since the 2017 study; both are EPR programs. Producer responsibility for pharmaceuticals was passed in 2018 and became operational in 2020. The paint product stewardship program became law in 2019 and started collection of unwanted paint in April 2021. More detail on current funding mechanisms can be found in Chapter 2, Current Funding Types.

Key recommendations of the 2017 report concerned the Solid Waste Collection Tax, suggesting revenues could be used specifically for solid waste purposes, which is not the current practice. In fiscal years 2019-2023, most tax receipts were deposited into the Education Legacy Trust Account, with some funds going into the General Fund.² In previous and subsequent years all receipts were to be deposited into the Public Works Assistance Account, which is open to all public works eligible projects, most of which are outside the scope of solid waste. A related recommendation suggested that raising the existing tax level and dedicating the increased amount for solid waste purposes could provide

² Chapter 2, Current Funding Types, of this report provides more detail on the recent distribution of taxes to solid waste-related programs.

funding for solid waste system needs. Recommendations also included the consideration of expanding the tax to cover additional materials streams, such as recycling and organics collection, transfer, storage, and processing and/or sales, at a lower rate than for garbage disposal, and dedicating that new funding for solid waste purposes.

The 2017 report listed recommendations for expanding the use of existing city and county funding mechanisms that may be underutilized. These mechanisms, described in Table 2, were identified for local governments to consider or reconsider to help meet their funding needs. The report also recommended Ecology support training to cities, counties, and local boards of health on how to apply these existing, flexible options available to them to provide sustainable funding.

Table 2. Recommended Local Funding Mechanism, 2017

Local Funding Mechanism Policy	Purpose
<p>Excise and other taxes and fees via county solid waste disposal districts and collection districts</p>	<p>Counties with a population of less than one 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 have the authority to levy an excise tax on district residents and businesses to fund disposal district activities. Uptake of this approach has been limited due to the real or perceived risk of taking on these assets and responsibilities.</p>
<p>Local Board of Health fees</p>	<p>Local boards of health have the authority both to enact regulations to protect public health and to establish fee schedules for services they provide. This authority is frequently used in relation to activities such as garbage or composting facility permitting, plan review, inspections, monitoring, or enforcement. It may also include oversight of solid, hazardous, or infectious waste collection operations.</p>
<p>Sustainable rate structures and tip fee structures</p>	<p>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.</p>
<p>Service-level standards and mandatory collection</p>	<p>Cities are directly authorized to adopt ordinances mandating the use of solid waste, recycling, and composting collection systems, and to establish collection charges. While some jurisdictions find them politically challenging, sustainable collection rates, collection charges, surcharges, and related taxes and fees can be and are used to fund many components of the solid waste system.</p>

Local Funding Mechanism Policy	Purpose
<p>Contract fees and embedded services</p>	<p>Cities are authorized to contract garbage, recycling, and composting services. 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. Cities have used these fees for a variety of programs, including city-provided education and outreach, waste reduction, and other waste-related activities.</p>
<p>Recycling revenue-sharing agreements</p>	<p>Some city collection contracts include revenue sharing provisions in which the hauler returns all or part of commodity revenues from the sale of collected recyclable materials to the city. Certificated solid waste haulers serving unincorporated areas can keep up to 50% of commodity revenues if the funds are used to increase recycling following a plan that is approved by the appropriate local government authority. This plan must be consistent with the local solid waste plan and demonstrate how revenues will be used to increase recycling. The remaining revenue will be returned based to residential customers. Without the revenue-sharing agreement 100% of the revenues from the sale of residential recyclables are returned to customers as a "commodity credit" line item on bills.</p>

Other key findings of the 2017 report included:

- Flexible city and county mechanisms exist but may be underutilized by municipalities.
- State funding for local governments has been reduced in past years due to redirection 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. As of the time of writing of this report, funding has been restored to higher levels than in 2017.
- A primary new funding mechanism used in other countries is EPR for PPP.
- Solid waste collection rate structures could be made more transparent and sustainable by using practices common in other utilities, such as usage or incentive fees.
- Other funding mechanisms used elsewhere included methods that do not appear superior to mechanisms already authorized in Washington State.

Some of the recommendations made in the 2017 report have been pursued and/or implemented, including:

- The Local Solid Waste Financial Assistance (LSWFA) program was moved back to the operating budget and normal levels were restored after multiple biennia of reduction.
- Funding was restored to the Waste Reduction, Recycling, and Litter Control Account (WRRLCA).

- Development and implementation of EPR programs for paint and pharmaceuticals, while implementation of EPR for solar panels was delayed.

In reviewing *Funding Mechanisms for Solid Waste*, all solid waste funding recommendations from 2017 remain relevant and should continue to be practiced or considered for implementation, as applicable. At the state level these include the Solid Waste Collection Tax, Hazardous Substance Tax for Local Solid Waste Financial Assistance (LSFWA), Litter Tax, and Extended Producer Responsibility (EPR) for toxic and difficult-to-handle products. At the local level, these include training to cities, counties, and local boards of health on how to apply the existing, flexible options available to them, as well as the consideration or reconsideration of whether the following funding mechanisms could help them meet their unique funding needs:

- Excise and other taxes and fees via county solid waste disposal districts and collection districts.
- Local board of health fees.
- Sustainable collection-rate and tip fee structures.
- Service-level standards and mandatory collection.
- Contract fees and embedded services.
- Recycling revenue-sharing agreements.

This discussion is intended to build on the report – both by digging deeper into areas like packaging and by exploring new policies not included in 2017 (e.g., plastic tax). This report, combined with the 2017 report, provides Washington State with a comprehensive list of policy options to support local jurisdictions in the management of solid waste.

Alternative Funding & Policy Landscape Analysis

Building on the 2017 report, this analysis explores alternative funding mechanisms that have been implemented in other states and countries in greater detail. Many of these are based on fundamental concepts of taxing and EPR to include packaging and plastics. Others are more targeted efforts that are system approaches, like hub-and-spoke initiatives and statewide technical assistance programs.

The mechanisms in this report have been selected based on the detail provided in the Request for Proposals, discussions during weekly meetings with Ecology staff, and the project team's experience in assessing the implications of policy and regulatory strategies to support workable and effective programs to meet key goals and targets in Washington State.

Several U.S jurisdictions, including Washington State, have debated one or more measures to establish alternative funding mechanisms in their 2023 sessions. As of May 2023, those outlined below have proposed legislation, but have not yet enacted their proposals unless otherwise noted:

- **EPR for PPP:** Eleven U.S. state legislatures have debated EPR for PPP program proposals in 2023 including Connecticut, Hawaii, Illinois, Maryland, Massachusetts, North Carolina, New Jersey, New York, Rhode Island, Tennessee, and Washington. While Maryland and Illinois introduced complete program proposals earlier this session, the bills that ultimately passed out of the legislatures were amended to include only certain features of a planned program such as statewide needs assessments and advisory councils. These enacted measures suggest that both states will eventually join the four existing EPR for PPP states: Maine, Oregon, Colorado, and California in comprehensive program implementation.
- **Deposit Return Systems (DRS):** Five U.S. states have introduced new program proposals including Illinois, Maryland, Minnesota, Rhode Island, Texas, and Washington, and five of the ten states with existing programs introduced program expansion bills, including California, Maine, Massachusetts, New York, and Vermont. In 2021 and 2022, Oregon, California, and Connecticut expanded their DRS programs to include more covered beverages and container types, but Iowa, Hawaii, and Michigan have not successfully expanded in several years, and a new program proposal has not been enacted since the early 2000s.
- **Plastic Taxes and Fees:** Predating this legislative session, two states have attempted broader state-wide plastics tax bills. In the 2021 session Washington introduced bills that did not pass (House Bill 1488 and Senate Bill 5129) and in the 2022 session Hawaii introduced a bill that did not pass (House Bill 2399). While significantly different than the 'plastic fees and taxes' explored in this report, several states have proposed bills to add fees as a disincentive to using plastic products, packaging, and food service ware. Two U.S. states, Arizona and New York,


proposed fees for certain plastic packaging/products, including plastic bags and foodservice containers, respectively. Colorado, Washington D.C. and several other local jurisdictions currently have plastic carryout bag fees in place. In many cases, covered stores are required to remit at least a portion of plastic bag fees collected to the municipality or county, which may then use those fees to fund certain environmental programs. New York's proposed policy would require the state to use container fees to improve foodservice packaging recycling infrastructure and fund local litter clean up events and public education efforts.

- **Regionalized Hub-and-Spoke Systems:** The federal government proposed the 'Recycling Infrastructure and Accessibility Program' as a part of Senate Bill 1189 (2023 session) to establish a pilot grant program for funding recycling infrastructure investments in underserved communities using a hub-and-spoke model. The measure does not specify additional objectives or features of the proposed program. Many states have these systems in place, whether state-wide or more regional (e.g., New Mexico and Western Tennessee).
- **Technical Assistance Programs:** Several different recycling-related bills introduced in 2023 make provisions for technical assistance. While technical assistance is not a funding mechanism per se, it is a system approach that can supplement and reduce the financial burden on local resources. For instance, Rhode Island HB 5450 (2023 session) requires the Rhode Island Resource Recovery Corporation to provide technical assistance concerning refuse to cities and towns. Similarly, Maryland HB 1089 (2023 session) creates the Office of Recycling to provide technical assistance to the local governments with respect to the DRS requirements of this title.

Extended Producer Responsibility

EPR programs require producers (typically brand owners) to take responsibility for their products and/or packaging at the end of their useful life. The responsibility can be financial, operational, or a combination of the two, depending on the legislation. Washington already utilizes EPR programs to manage electronics, mercury-containing lights, pharmaceuticals, and paint. EPR for solar panels manufactured after 2017 is slated for implementation in 2025. When structured to provide revenue via reimbursement for providing recycling or waste handling services, or to reduce costs by removing the responsibility for handling a material or product, EPR can provide significant financial benefits to local governments. EPR can also be an effective policy tool for addressing other large or difficult-to-handle items, such as mattresses, carpets, textiles, and electric vehicle batteries.

The 2017 report recommended expanding EPR programs for hard-to-recycle and hazardous products by increasing the range of electronics accepted; implementing a pharmaceutical program statewide; and implementing new programs for difficult-to-handle and hazardous products (e.g., paint, mattresses, batteries, appliances with refrigerants, and/or household hazardous waste). Washington subsequently developed and implemented EPR programs for paint and pharmaceuticals, while solar



panel implementation was delayed. In addition, it was recommended that the state monitor the effectiveness and stakeholder impacts of PPP programs elsewhere for potential consideration.

EPR for Packaging and Paper Products (PPP)

EPR programs for PPP usually cover at least all residential (consumer-facing) packaging and paper products, including non-recyclable materials and PPP from online retailers. Some programs also cover residential material collected in public spaces and, less often, commercial and industrial PPP.


While definitions of packaging vary by jurisdiction, packaging generally covers a material, substance, or object that is: used to protect, contain, transport, or serve a product; sold or supplied to consumers expressly for the purpose of protecting, containing, transporting, or serving products; attached to a product or its container for the purpose of marketing or communicating information about the product; supplied at the point of sale to facilitate the delivery of the product; or supplied to or purchased by consumers expressly for the purpose of facilitating food or beverage consumption that is ordinarily discarded by consumers after a single use or short-term use, whether or not it could be reused.

EPR requirements for packaging first appeared in policy and law in the early 1990s in several European countries, including Germany, Sweden, and France, with other European Union (EU) jurisdictions following suit throughout that decade. In the 2000s, EPR for PPP began to take shape across Canada. Since then, EPR programs for PPP have continued to evolve and expand across Canada and, over the last two years, in four states in the United States. In addition to holding producers responsible for recycling products and/or packaging, EPR programs bring a level of data reporting, tracking, and transparency that was previously lacking. Under EPR, producers are required to report the amount of material sold in the state, as well as the amount collected and recycled. Some models require a third party to certify the reported data. Producers are often held accountable for additional performance targets, either set in regulation or established by the Producer Responsibility Organization (PRO) in consultation with stakeholders.

Program Differences

Policy frameworks vary in allowing producers to comply individually and/or allowing for producers to work as part of a collective PRO. Legislation may also allow for a single PRO (requiring all producers to join one state-approved organization) or multiple PROs. In the case of multiple PROs, the state may also mandate them to work in cooperation for the collection of materials.

EPR legislation for PPP varies in the scope of materials covered. Programs include some or all the following categories: packaging, paper products, single-use items, food service items, and packaging sold as a product. Programs that are more inclusive of all typical materials collected curbside are likely to result in greater program efficiencies, spread the cost of recycling more



evenly among producers, and avoid additional costs of material stream auditing of products not covered by the legislation.

Other areas where there tend to be variances include the scope and provision of collection services. All EPR packaging legislation requires collection from residential premises, but some jurisdictions expand the collection scope to include municipal streetscapes, parks, and/or events, as well as all or part of the industrial, commercial, and institutional sectors. Collection services may be provided by the PRO directly (which may include offering first right of refusal to municipalities) in combination with direct contracts with service providers, or collection may be delegated to municipalities in the legislation with producers required to reimburse all or part of the costs.

Exemptions

EPR programs also generally allow for small producers to comply via a set fee to reduce the administrative burden or provide exemptions for small producers and/or charity organizations. Exemptions beyond this are rare outside of the U.S., apart from materials handled under another EPR program (e.g., beverage containers, paint). Because the volume of material from small producers is believed to be low and difficult to quantify in the system, the cost for collecting these materials is incurred by the obligated producers (i.e., brand owners and importers).

In the four U.S. jurisdictions that have passed EPR for PPP to date – Maine, Oregon, Colorado, and California – the exempted materials are more extensive than what have been excluded in other jurisdictions. Exempted items in some U.S. states have included perishable-food packaging, medical products, drugs, infant formula, and businesses suffering from financial hardship. As these programs have not yet been implemented and some of these categories are yet to be defined, it remains to be determined how these materials will be considered in the collection system – i.e., whether the obligated producers will be expected to pay for the collection and recycling of this material, or whether there will be an alternative. For example, in Maine, paper products are not an obligated product. It is expected that there will be material stream audits to determine how much of the recycling costs are related to paper products and other items that are not obligated (and will therefore remain with municipalities) compared to costs related to obligated materials which will be paid by the PRO.

The following sections provide details about EPR models that have been utilized by publicly managed solid waste programs in other states, provinces, or countries that provide relevance to Washington. Three EPR approaches will be explored:

- Full responsibility models where producers are held accountable for program operations and finances.
- Full financial responsibility with municipal collection model.

- Partial responsibility where producers are funding parts of the system, with municipal collection.

The particular model of EPR chosen in a jurisdiction is typically driven by political and operational conditions, including the existing level of service, the regulatory or programmatic oversight of collectors and processors, and the engagement of municipalities as direct service providers or contractual program managers. Regardless of the model, the greatest impact to local governments will be in the way in which various program goals are set and the impact those goals have on program delivery and performance. Program goals on accessibility, service standards, and collection rates will determine what services are provided throughout the state. While the full responsibility model tends to yield some of the best results, providing municipalities with the first right of refusal for collection can support municipalities that already have collection systems in place while easing the cost burden. Accessibility standards, whether in legislation or developed in the program plan, will determine what level of service is offered to communities, usually based on population.

Full Responsibility Model

The full responsibility EPR model results in the greatest level of financial and operational support for municipalities operating recycling programs for PPP. These models often allow municipalities the choice to participate in material collection and processing with compensation by the obligated producers, or to allow responsible producers to make collection and processing arrangements. Where municipalities do not collect recycling, the program procures collection services, ensuring statewide program delivery. In jurisdictions with full producer responsibility, recycling tends to have a more uniform feel for the residents, with common collection mechanisms and a uniform list of products collected.

Example Program Overview: Colorado

Colorado is the first state to hold the producers of packaging (manufacturers and importers) fully financially and operationally responsible for collecting and recycling the packaging they produce. Colorado's Producer Responsibility Program for Statewide Recycling Act, House Bill 22-1355, was signed into law June 3, 2022. The law requires that all Coloradoans receive recycling collection that is as convenient as trash service. A PRO is to be established by June 2023 with program plan implementation to begin the first quarter of 2026, following the approval of the implementation target scenario by the legislature and program approval by the Colorado Department of Public Health & Environment. The needs assessment will develop three scenarios, and the legislature will decide which one the PRO implements. The provision of collection services (curbside, drop-off center, or other means) is not prescribed and is likely to be a combination of municipal collection and direction service providers contracted by the PRO.

Scope

The initial phase of the program focuses on residential collection. The program plan must describe a process and timeline (beginning no later than 2028) to expand recycling services to applicable non-residential covered entities (e.g., businesses, schools, hospitality, government buildings, and public places), as identified in the needs assessment.

Producers are expected to cover most materials in the curbside collection system, such as packaging, paper, and food service single-use items. Colorado has an extensive list of products that are not included in the legislation, ranging from material intended to be used for at least five years; used to contain a product that is regulated as a drug, medical device, dietary supplement, or infant formula; and paper products used for a print publication that primarily includes content derived from primary sources related to news and current events.

Funding


Given that the program has been legislated but is still under development, details of the operational program such as total cost, the list of collected materials, collection methods and payments, and others are undefined at this time. For the 2022-23 fiscal year, \$119,130 is appropriated from the general fund to the department to implement the Act. Going forward, producers are required to provide a full funding for convenient municipal recycling, either through municipal reimbursement or direct contracts with service providers, ensuring a sustainable funding mechanism for recycling services and recycling infrastructure across all areas of Colorado.

Other Jurisdictions Using This Model

While the European Union (EU) has a myriad of collection systems, countries like Belgium, Germany, Austria, Finland, and Malta contract the collection of materials, as is expected in Colorado. Municipalities may choose to participate in this and are often supported, as is the case in Belgium. In the past two years, other models in Canada (e.g., Alberta, Manitoba, and Ontario) have been developed or revised to provide greater producer responsibility. British Columbia (BC), discussed below, has been operating under a similar model to Colorado since program implementation in 2014.

Example Program Overview: British Columbia

In BC, the PRO Recycle BC has committed to providing curbside services in communities where: a curbside garbage collection program has been in place for a minimum of two years; the community represents an incorporated municipality (or meets an equivalency standard); and the population is at least 5,000. Smaller communities that are adjacent to larger communities may also receive curbside service. The program contracts with over 200



depots to complement curbside and multi-family service, and services for materials not collected curbside, such as polystyrene and film. They also serve remote and rural areas of the province. Program accessibility in 2021 was 99.3% of the BC populations located within a 30-minute or 45-minute drive of a depot, depending on whether they are urban or rural residents, respectively. The PRO allows communities to have the first right of refusal for collection services and contracts with private service providers.

The payment for services is based on a set methodology and data survey of collectors. The survey results are used to set payment incentives for local governments that choose to collect materials, with an increased incentive provided for multi-stream collection. There has been a trend in BC of local governments moving away from operating or administering program collection to have Recycle BC provide direct services. This has been attributed to increased trust in the program over time, as well as increased awareness of saving municipal resources, which are now directed to other ends. For a sense of scope, the population of B.C. was 5,000,879 in 2021. While total population is lower than that of WA, the population is also more dispersed, increasing collection costs. Program fee revenue (producer payments) in 2021 was C\$132,941,328 (US\$99,280,584) with an additional C\$645,653 (US\$482,174) from investment income. Program expenses in 2021 were C\$101,997,267 (US\$76,171,599) with any excess funds held by the program as contingency.

Impact Assessment on Local Government Budgets and Funding

The full responsibility model will provide the highest level of support to local governments, compared to the full financial and partial responsibility models explored in the following sections. This model provides relief from the costs and operational responsibility to provide recycling services, and will likely lead to increased recycling and landfill diversion. With the increased diversion of material from landfills, there will also be an associated reduction in tip fee funding on an annual basis. However, there are long term benefits of reducing the materials volume, such as prolonging the lives of landfills. This is likely to be most impactful in communities that rely on waste disposal fees to fund other programs. In addition to this, and depending on how the service and future model are structured, there may be lost revenue from the revenue sharing agreements or direct sales of high-value recyclables. However, from a system costs perspective – as presented in the annualized system fiscal impact analysis of HB 2003 / SB 5697 in the appendix of Chapter 5 – costs savings provided by the lost revenue are not significant enough to outweigh the cost savings from the program. Statewide projected annualized net cost savings to local solid waste systems are expected to range from \$176M-\$268M. The majority of these cost savings are associated with the transfer or reimbursement of costs associated with recycling programs in place prior to the implementation of the policy – specifically with recycling collection, processing, and outreach and education.

How this model may affect a community based on location, size, service level, etc. will also vary depending on the requirements of the legislation. With EPR, larger municipalities (e.g., more than 5,000-10,000 residential dwellings) are likely to be offered curbside collection services. However, there are often parameters to ensure jurisdiction-wide services. This can result in alternative collection methods provided by producers, such as a 'hub-and-spoke' system for more rural and/or remote areas, as well as alternative collection programs funded by packaging producers for materials that are difficult to manage via curbside collection.

Other Impacts

As these mechanisms work with competitive collection systems, the producers are funding the complete collection and processing system. The bid for services is public and transparent, generally using a request for proposals (RFP) process. Private collectors and/or municipalities should include the full cost of collection services in bidding on these contracts in a competitive manner. The EPR PPP legislation introduced in WA in both 2022 and 2023 proposed that the PRO utilize the existing UTC system where applicable for the collection of PPP. The UTC system is a geographic zoning of the State, in which a collection service provider for recycling and garbage is granted a Certificate of Convenience and Necessity (or a G-Certificate) for a given area. In most areas under county jurisdiction where residential recycling services have been designated, collection services are provided by the solid waste collection companies under the UTC. G-Certificates are grandfathered and require approval by the UTC for rate changes. Approximately 37% of state households have access to residential recycling services provided by UTC-regulated collection service providers. This is unlike BC and Colorado and will result in significant differences in contracting for collection services, as UTC pre-determines the collection service providers in these areas.

While some have raised concerns related to the impact of EPR on the price of consumer-packaged goods, such price increases have not been documented. Several recent studies reviewed the impact of EPR on consumer prices. [2], [3] The findings of these studies suggest that other factors, such as elasticity of demand or consumer willingness to pay, have more significant impact on product pricing.

Financial Responsibility with Municipal Collection Model

The financial responsibility with the municipal collection model results in financial compensation to municipal governments that provide recycling programs. These models vary in the portion of financial responsibility to be paid by the producers, ranging from 50%-100%. Typically, a formula or methodology for determining municipal reimbursement rates is established to ensure fairness and encourage efficient and effective collection systems. The reimbursement rates account for various collection costs, and will often group municipalities for payments according to set geographic (rural vs. urban) or demographic (population size or density) data. With a 100% producer funding

requirement, most municipalities support this policy approach to support the management of municipal recycling, as they generate significant revenue to manage targeted recyclable materials, with limited change in service provision. Though these systems often result in increased diversion of materials with more material collected statewide over time, they tend to go through some challenges in the setting of municipal reimbursement rates. This can result in fragmented systems that do not maximize efficiency on collection, transportation, and/or processing.

Example Program Overview: Maine

On July 13, 2021, the governor of Maine signed into law LD 1541, the “Act to Support and Improve Municipal Recycling Programs and Save Taxpayer Money” making it the first state to enact an EPR law for the management of packaging material. It is expected that a stewardship organization (SO) will be selected to manage the program in 2026, with the first payments made to municipalities in 2027. The Maine Department of Environmental Protection will select and enter into a contract with a packaging SO to operate the program. The process will be consistent with applicable competitive bidding requirements under state purchasing laws (issuing an RFP) and will follow the initial adoption of rules by the department. The proposals must be required to cover a ten-year operation of the packaging stewardship program.

Maine’s stewardship program for packaging holds the producers of packaging (e.g., brands and manufacturers of packaged goods) financially responsible for collecting and recycling the packaging they produce. Municipalities will continue to provide collection services, either directly or through contracted services, with the producers providing full funding for the collection and processing costs of obligated packaging.

Municipal Participation

A municipality may elect to, but is not required to, participate in the packaging stewardship program. To be eligible for reimbursement of packaging recycling costs, a municipality must, at a minimum:

- Provide for the collection and recycling of packaging material that is used in the municipality and is readily recyclable (as defined in state regulation).
- Annually report to the stewardship organization (a government appointed PRO) all information necessary for the stewardship organization to determine the municipality's incurred costs associated with its collection, processing, transportation and recycling or other management of recyclable material and of municipal solid waste.

The legislation does not have any provisions that limit participating municipalities to existing services, allowing municipalities to expand services or create collection programs where they may be lacking in service. Similarly, the law does not limit the obligation to

residential materials, allowing municipalities to add commercial or institutional packaging they collect to the system.

Program Scope

Maine's producers are expected to cover most materials in the curbside collection system, provided further exemptions are not granted in rule making. The following materials and producers are not obligated by the regulation:

- Paper products that are not packaging (e.g., newsprint, flyers, magazines, catalogs, etc.).
- Beverage containers (covered under deposit return system).
- Small producers, defined as those with less than \$2 million/year gross annual revenue, less than one ton/year of packaging material, perishable food producers with under 15 tons/year of packaging material, and producers with more than 50% of their total gross revenue in the prior calendar year from the sale of goods acquired through insurance salvages, closeouts, bankruptcies, and liquidations.
- Non-profit organizations.

As the packaging stewardship program is under development in Maine, exemptions for additional material types may be considered by the state in rule making.


Given the status of program development (legislated, but in the rule-making phase) details of the operational program such as total cost, list of readily recyclable materials (designated for collection statewide), collection methods and payments, and other details are unspecified. However, it is expected the producers will fund most collection cost for municipalities in Maine for designated materials, due to the regulatory requirements.

Funding

For the 2022-23 fiscal year, \$131,292 is appropriated from the general fund to the department to implement the act. It is anticipated that \$182,758 will be appropriated in 2023-24, and \$191,047 in 2024-25. As noted above, details of the operational program such as total cost, the list of collected materials, collection methods and payments, and other details are undefined at this time.

Other Jurisdictions

In some European Union jurisdictions (e.g., Netherlands, France, Spain, and Italy) municipalities continue to operate some or all the collection and processing. In Canada, Québec, Ontario, Manitoba, and Saskatchewan have a similar model to Maine. These Canadian jurisdictions passed legislation between 2008 and 2013 and launched programs between 2010 and



2016. While the portion of producer payments³ and the scope of product packaging that is covered vary, they follow a similar structure in that they hold municipalities accountable for collection and processing, and producers accountable for paying all or a portion of the system cost. The regulations vary slightly by jurisdiction in how municipalities are reimbursed. In some jurisdictions (such as Québec and Ontario), municipal program costs and payments are the responsibility of one organization, while a second organization then takes this cost and is responsible for setting producer fees, collecting fees from producers, and providing payment to organizations distributing funds to municipalities. However, in other jurisdictions, like Saskatchewan, payments flow directly from the PRO to the municipality.

These programs, like other stewardship model programs, are funded predominantly by the producers of PPP, while in cases with shared funding models, municipalities and ratepayers continue to be responsible for the remaining portions. Once the total program costs are known, PROs allocate cost to producers, based on formulas set by material type.

In 2021, Manitoba amended its legislation to require producers to take full financial responsibility for the packaging program. The program plan underwent public consultation in August 2022 and will function more similarly to BC, giving municipalities the first right of refusal to participate in the delivery of collection services. Saskatchewan consulted on similar regulatory changes in the spring of 2022, and it is expected they will follow a similar policy approach to Manitoba and hold industry fully accountable for program operations and funding.

In Québec, producers are responsible for funding 100% of municipal costs. The municipal reimbursement formula in Québec includes:

- Cost of collection, transport, sorting, and packaging of recyclable materials for services offered door-to-door or by voluntary contribution (e.g., eco-center or drop-off point).
- Financing costs and depreciation of fixed assets for the recycling of recyclable materials.
- Cost of collection, transportation, sorting and packaging of recyclable materials collected from industries, business, and institutions.
- Cost of collected recyclable materials during special events.

In Québec, municipalities are divided into six groups for the purpose of calculating the eligible compensation for the services they provide. Municipalities report data for the reimbursement formula to the management body responsible for allocating municipal payments. This data is divided into six groups using population and the distance from a major city, and is used to

³ For example, Quebec is at 100% of producer payments, Ontario is transitioning from 50% to 100% over time, Manitoba was at 80% and is now at 100%, and Saskatchewan is at 75%.

develop performance efficiency factors for payment purposes that consider the amount collected, the cost, and the population.

For municipalities located 400km or more from Montreal or Québec City, payment to the municipality may not be lower than 70% of the net cost declared by the municipality. This ensures that more remote communities are adequately compensated, though their performance efficiency factor may not favor payment of 70% of program cost.

Most municipalities in Québec are compensated for more than 80% of the operational costs, with some receiving 100% of costs. Municipalities that perform lower on the performance efficiency factor will receive less payment.

Impact Assessment on Local Government Budgets and Funding

With the financial responsibility of the municipal collection model, local governments are compensated for the cost of managing the materials targeted. There is likely to be slight variance in total cost coverage, depending on the efficiency in a municipality. With the increased diversion of material from landfill, there will also be an associated reduction in tip fee funding on an annual basis, though there are long term benefits of reducing the materials volume, prolonging the life of the landfill, where landfills are municipally owned. This is likely to be most impactful in communities that rely on waste disposal fees to fund other programs. However, the lost revenue is not significant enough to outweigh the economic benefits from the program. In addition to this, and depending on how the service and future model are structured, there may be lost revenue from the revenue sharing agreements or direct sales of high-value recyclables.

In practice, this model has often grouped similar municipalities for payment purposes. Groupings help to account for varied cost per ton that is often needed to manage materials from more rural and remote, or smaller communities, recognizing the additional cost of collection in these areas. As with the full producer responsibility model, there may also be parameters regarding collection standards based on location, size, service level, etc., meaning some municipalities may be funding for curbside collection while others may be funded for a recycling depot or other collection system.

Partial Responsibility Model

The partial responsibility model is unique to Oregon. The Plastic Pollution and Recycling Modernization Act maintains the existing recycling system and focuses efforts of the PRO on improving the collection and diversion of packaging recycling in the State.

Example Program Overview: Oregon

Unlike most EPR programs, Oregon has regulated a stewardship model that will require producers to support program improvements, rather than fund and operate the existing collection system. The Plastic Pollution and Recycling Modernization Act (Senate Bill 582) was signed by Governor Brown on August 6, 2021. The new law became effective January 1, 2022, and the program is set to launch in 2025 with producers joining a PRO and beginning implementation in July 2025.

This Act includes packaging, nondurable material used in storage, shipping or moving, printing and writing paper, and foodservice ware generally intended for single use. Exemptions include non-profit organizations, public bodies, small producers, and a number of product-specific exemptions.

Typically, local governments in Oregon enter into franchise agreements with private service providers for recycling collection and processing services, and those service providers bill residents directly for the service. The Act will require producer funding for certain activities related to collection program expansion and recycling processing, while residents will continue to pay for collection service. While this support will improve and expand recycling in the state, it is unclear which municipalities will benefit and how much, as producers are required to fund discrete program elements, not the system in its entirety.

Scope

Oregon's Plastic Pollution and Recycling Modernization Act holds the producers of packaging, both manufacturers and importers, financially responsible for enhancing the recycling system in the state. The existing recycling system, including residential, commercial, and institutional, will remain in place with the current funding. The obligated producers will be responsible for contributing funds to enhance recycling, including costs associated with the expansion and provision of recycling collection services for covered products. This includes:

- Local government expansion of services, including on-route programs, start-up costs, and recycling reload facilities (also known as transfer facilities).
- Depot container on-site monitoring equipment, site preparation, or other start-up costs and operational costs.
- Educational resources and outreach campaigns to enhance diversion of packaging and printed paper.
- Responsible end market development.
- Improvements in processing infrastructure by supporting processors.

Funding

Oregon DEQ has developed estimates for the total statewide recycling program for 2028-2029. Ratepayers will pay approximately \$216 million for recycling services, while the cost to producers is estimated at about \$83 million to fund program improvements.

Other Jurisdictions

The Oregon legislation is unique and not comparable to other EPR programs for the management of packaging and printed paper.

Impact Assessment on Local Government Budgets and Funding

This partial responsibility model should result in cost savings on education and outreach campaigns, as well as savings to transport materials to processing facilities, especially for remote or rural areas. With the increased diversion of material from landfill, there will also be an associated reduction in tip fee funding on an annual basis, which is likely to be most impactful in communities that rely on waste disposal fees to fund other programs. However, the lost revenue is likely not significant enough to outweigh the economic benefits from the program, dollar for dollar. In addition to this and depending on how the service and future models are structured, there may be lost revenue from the revenue sharing agreements or direct sales of high-value recyclables.

As this model is focused on expanding and enhancing recycling in the state, it is difficult to project how much benefit will be gained in a jurisdiction based on a community's size and location. As with the other two EPR models, much of this will depend on the variables determined in legislation and rule making. However, it is likely that urban communities will see benefit from material expansion, and that rural and remote communities will likely see benefit from both collection service expansion, as well as any material expansion.

Deposit Return Systems

While not explored in the 2017 report *Funding Mechanisms for Solid Waste*, DRS, also known as bottle bills, continue to garner political attention in Washington and elsewhere. DRS are a proven, sustainable method of capturing beverage containers for recycling. The refund value of covered containers (typically five or ten cents in the U.S.) is applied at the point of sale to act as a monetary incentive for the consumer to return the container for recycling. Environmental, economic, and societal benefits of bottle bills include:

- Reducing waste and litter.
- Increasing container recycling rates.
- Supporting a clean supply of recyclable materials.
- Conserving energy and natural resources.

- Reducing waste disposal costs.
- Creating new businesses and jobs.
- Supporting community groups and charities that can raise funds by collecting and redeeming containers.

DRS programs do not directly fund local governments. Instead, they remove the costs associated with managing beverage containers, whether they are in the waste stream, the recycling stream, or discarded as litter. A recent study by ReLoop modeled the economic benefits and challenges in five northeastern states with DRS in place.[4] The report modeled the cost and benefits in each state, factoring in lost tipping fees and recycling revenue, as well as reduced costs to collect and dispose of garbage and abate litter. While results varied significantly based on population, all states show positive economic benefits.⁴


Although DRS do not make direct payments to local governments, unredeemed deposits may support beverage container recycling in the state. Depending on the program, unclaimed deposit funds are retained by beverage distributors, state agencies, or a combination of the two.

In California and Hawaii, state agencies manage and control the finances of the beverage container deposit system. The agencies collect deposits from distributors who initiate the deposit when they sell beverages to a retailer and collect a deposit. The retailer then collects the deposit from the consumer. The consumer can return the container for a refund, which is paid at a redemption center or processor. The redemption center or processor is reimbursed by the state using the state-managed fund, which is also used to pay for program operation and administration. Hawaii's fund also receives one cent per container from beverage manufacturers to help fund the program. In both states, 100% of unclaimed deposit monies are used by the state agencies to manage the system, educate the public, and promote markets for recycled material.

In contrast, Oregon and Iowa beverage bottlers and distributors keep all unclaimed deposits. Oregon's program also receives \$9 million per year in funding from the beverage distributors and grocery retailers.

In Connecticut, Massachusetts, New York, Maine, Michigan, and Vermont, distributors and bottlers are required to turn over all or a portion of unclaimed deposits to the state. In these states, the funds go to general revenue, a set environmental fund, or a combination of the two.

⁴ Maine had a low estimate of \$900,000 to high estimate of \$1.2 million compared with New York's low estimate of \$70.9 million to a high estimate of \$100 million.



Washington attempted to pass the first DRS in 1979. Washington Beverage Container Deposit, Initiative 61, would have established a minimum five cent recycling deposit on aluminum beverage containers. The ballot initiative was defeated by 57.6-to-42.4% of the popular vote. Most DRS were enacted in the 1980s, predating widespread curbside recycling systems. The legislation therefore did not consider the impact on material recovery facilities (MRFs) and/or municipalities from diverting these materials from general recycling. RRS completed a modeling study for the National Waste and Recycling Association to help quantify the impacts of bottle diversion on MRF costs and revenues. [5] The report explores policy options that compensate municipalities for lost revenues, compensate MRFs for the beverage containers handled, require beverage container distributors to invest in additional recycling, and/or implement beverage container deposit in concert with extended producer responsibility. Specifically for municipalities, legislation could require that municipalities be reimbursed for lost revenue that results from the implementation/expansion of deposit programs. For MRFs, legislation could require that they be paid the deposit value and/or a handling fee for the beverage containers residents place in the municipal recycling system.

DRS programs enacted at the state level vary significantly by jurisdiction. Key differences include the types of beverages covered, the container material types covered, the deposit amount, and the flow of funds to players in the supply chain. Some states include only carbonated beverages, reflective of the dominance of these beverages when they were enacted in the 1970's and 80's, while others have added water, and yet others include juice, teas, and other beverages. Deposits range from 5 to 15 cents in the US, and handling fees paid to collectors range from zero to 8 cents per container. The use of unclaimed deposits also varies by state. Funds are generally retained by beverage distributors or state level departments, or a combination of the two. Some states like California and New York prescribe that funds be used for certain environmental programs, which may benefit local governments.

Redemption rates in deposit states range from a low of 59% to a high of 91%. The highest redemption rates occur in states that have a minimum 10 cent deposit (MI and OR). [6] Deposit programs that cover a broader range of beverages and containers have a greater impact on overall container recycling rates.

Oregon

Oregon's Bottle Bill was introduced in 1971, the first in the United States. The bill was created to address a growing litter problem in the state and has since undergone several revisions to expand covered container categories and increase the deposit amount from 5 cents to 10 cents. Most recently, the bill was updated to include canned wine beginning in 2025. Approximately 88% of beverage containers sold in Oregon are currently subject to the legislation.

Table 3 summarizes the beverage container types included in Oregon's bill.

Table 3. Oregon Bottle Bill Beverage Container Types

Container Type	Beverage Container Categories Included	Beverage Container Categories Excluded
Glass, metal, or plastic containers ≤ 3L	<ul style="list-style-type: none"> • Water (including flavored, carbonated, and mineral water) • Beer/malt beverages • Carbonated soft drinks • Hard seltzers • Kombucha • Canned wine (beginning July 1, 2025) 	<ul style="list-style-type: none"> • Wine • Distilled spirits • Infant formula • Liquid meal replacements • Dairy and dairy alternative-based beverages
Glass, metal, or plastic containers between 4 oz and 1.5L	<ul style="list-style-type: none"> • Tea • Coffee • Hard cider (if 8.5% ABV or less) • Fruit, vegetable, and aloe vera juice • Non-alcoholic wine • Beverages containing marijuana or hemp • Energy and sports drinks • Coconut water • Oral electrolyte replacements • Ready-to-drink cocktail mixers • Muscle Milk • Beverages containing dairy or plant-based milk where milk is not the first ingredient 	<ul style="list-style-type: none"> • Wine • Distilled spirits • Infant formula • Liquid meal replacements • Dairy and dairy alternative-based beverages

There are currently 1,952 retail return sites, 706 reverse vending machines, 47 dealer redemption centers, 25 redemption centers, and 13 BottleDrop Express sites deployed in the state. In 2012, distributors began reporting beverage sales and returns to the Oregon Liquor and Cannabis Commission. Prior to 2012, there was no systematic reporting system in place.

The state’s program operator, the Oregon Beverage Recycling Cooperative (OBRC), collected \$237.5 million in beverage container deposits in 2021. With a redemption rate of 83.9%, \$199.3 million was returned to consumers, while the remaining \$38.2 million was retained by beverage bottlers and distributors. These unclaimed deposit funds are fully re-invested in the deposit system, forming a majority of the program’s operating budget of \$51.9 million. The additional program budget is covered by OBRC members, retailers, and program revenues like recycling commodities.

Michigan

The Michigan Beverage Container Act was implemented in 1978 to address roadside litter and promote a clean environment. Like Oregon, Michigan's refund value is ten cents per container. The state has historically maintained the highest redemption rate of any U.S. deposit program, typically collecting 80%-90% of beverage containers sold each year. The State of Michigan Treasury collects and distributes unredeemed container deposits.

In 2019, the Treasury reported \$381.1 million in deposits collected and \$338.1 million in refunds issued, for a total refund rate of over 88%. In 2020, pandemic disruptions are likely to blame for a 15% drop-in collection rates; \$401.8 million in deposits were collected, while only \$293.4 million was refunded.

In Michigan, 75% of the unredeemed deposit money is deposited into the Cleanup and Redevelopment Trust Fund (Trust Fund) and 25% is returned to the retailers. Of the 75% deposited in the Trust Fund, 80% goes to the Cleanup and Redevelopment Fund, 10% to the Community Pollution Prevention Fund, and 10% remains in the Trust Fund. The Trust Fund continues to collect the 10% per year until a maximum of \$200 million is met. The Community Pollution Prevention Fund is used for programs to educate both the general public and businesses that use or handle hazardous materials on pollution prevention methods, technologies, and processes, with an emphasis on the direct reduction of toxic material releases or disposal at the source. The Cleanup and Redevelopment Fund is used to clean up specific sites of contamination in Michigan.

Approximately 55% of beverage containers units are covered by the legislation.[7] Table 4 summarizes the beverage container types covered in Michigan.

Table 4. Beverage Container Types Covered in Michigan Bottle Bill

Container Type	Beverage Container Categories Included	Beverage Container Categories Excluded
Glass, metal, paper, or plastic containers less than one gallon	<ul style="list-style-type: none"> • Soft drinks • Soda water • Carbonated natural or mineral water • Beer, ale, or other malt drinks • Mixed wine drink or mixed spirits • Kombucha • All other non-alcoholic carbonated drinks 	<ul style="list-style-type: none"> • Wine • Distilled spirits • Infant formula • Liquid meal replacements • Dairy and dairy alternative-based beverages

California

The California Beverage Container Recycling and Litter Reduction Act was implemented in 1987 to encourage recycling and reduce litter, with a program goal of an 80% recycling rate. The deposit in California is five cents for containers under 24 ounces and ten cents for containers holding 24 ounces or more. All beverage containers are covered with the exception of milk, 100% fruit juice larger than 46 oz, vegetable juice larger than 16 oz, and beverages in refillable containers. Approximately 88% of beverage container units are covered by the legislation. The program has maintained recovery rates ranging between 61% and 74% since 2013, with the lowest collection rate being 61% in 2021.

Although the program in California has had significant challenges, including a large number of staff to implement it, there are several program funding elements worth highlighting. All the unclaimed deposit monies are used by the state agencies to manage the system, including compensating MRFs for the handling of containers, educating the public, funding of market development efforts for beverage containers, and funding of clean-up programs like the Conservation Corps. The total grant money awarded in the 2020-2021 fiscal year was \$10.66 million. Of this, \$9.34 million went to local grants and \$1.32 million went to other grants. In addition to this, \$9.13 million went to eligible cities and counties specifically for beverage container recycling and litter cleanup activities.⁵ Grants are based on a population-based formula. [8]

⁵ This included new recycling programs, curbside expansion to include beverage containers, water refill stations, and litter prevention and clean up actions when beverage containers are collected and recycled.

Canada

DRS are also broadly applied throughout Canada. All provinces have at least one beverage type and/or container type covered under an official contracted program except for Nunavut, where the official program operates as a hybrid in conjunction with a public co-op EPR program. Like the U.S., Canadian jurisdictions vary greatly in terms of the scope of containers covered, deposit amounts, and collection systems. Deposit amounts in Canada typically range between five to 20 cents (3.66 to 7.31 cents US) with the occasional container type over 20 cents (14.63 cents US).

Impact Assessment on Local Government Budgets and Funding

DRS are likely to result in cost savings associated with disposal costs, collection cost, and litter abatement. Like other models explored here, greater diversion reduces materials to landfill, resulting in a reduction in tip fee funding, which would be most impactful to communities that rely on waste disposal fees to fund programs.

Most DRS programs do not reimburse local governments and pre-date local government recycling programs. As municipal recycling programs have expanded and matured, the revenue from beverage containers is factored in to offset program costs. Beverage containers made of materials such as aluminum and PET are high value materials in the recycling stream. When considering adding DRS in a jurisdiction with a well-established recycling system, these costs and revenue reductions should be evaluated. While the economic benefits outweigh these costs, as demonstrated in the ReLoop study, the shift is not insignificant, particularly when local governments are responsible for the recycling program with no EPR support. [4]

The local governments most impacted by a DRS bill are likely to be those that are more reliant on landfill tip fees to fund programs, as well as those with well-established recycling programs that are receiving benefits from commodities. The impact of a DRS program on local government could be estimated by waste audits and MRF audits to clearly model the effect of removing legislated beverage containers from the current system. The 2023 draft DRS bill in WA set up a five-year fund to offset revenue losses.

Plastic Taxes and Fees

The 2017 report explored several existing tax revenue streams, including the Solid Waste Collection Tax, Hazardous Substance Tax, and Litter Tax. Since that time, taxes on plastics have been proposed or enacted in some locations. Recent activity on taxes and fees has been driven by the increased political attention on plastics in the environment. Taxes and fees on plastics or all packaging materials can be large revenue generators either at the state or local level. Hawaii proposed a bill in 2022 to charge a fee on plastic packaging sold, and several EU jurisdictions have implemented a plastic tax, with other EU countries intending to follow suit.

Fees and taxes on plastics, packaging and other waste materials can be allocated to general revenue or to specific activities to mitigate damage from the products or materials that are taxed. To support local governments with solid waste management, a tax or fee could be allocated to a dedicated fund with guidance on how money is to be used. The guidance could take into consideration both rural and urban needs.

Hawaii's Proposed Weight-Based Packaging Fee

Hawaii's House Bill 2399 was introduced in early 2022 but did not pass. While incorrectly called an EPR Bill, this bill would have placed a fixed rate fee on packaging by weight, charged to producers. The bill would have required large volume producers⁶ of fast-moving consumer goods⁷ to register with the Department of Health and pay an annual fee based on the amount of packaging placed on the market in the State each year. This bill covered all primary, secondary, and tertiary packaging intended for the consumer market, as well as service packaging designed and intended to be filled at the point of sale, including carry-out bags, bulk goods bags, and beverage containers, and is not limited to plastics.

Fees collected would go to a special fund and be used to create a report that assessed the resources needed to reduce the volume of packaging waste sent to landfills or power plants that burn waste as fuel by 50% and 80% by a date to be determined by rule. Funds would also be provided to counties to develop county-wide needs assessments and ensure packaging reuse programs be given priority for available money. Guidelines on the use of money in the fund would consider the needs assessment and recommendations from counties and registered producers. Beginning with a fiscal year determined by rule, the department would allocate money to each county for the costs of creating the countywide needs assessments. In subsequent years, the department would make available monies to each county to be expended for:

- Packaging reuse programs.
- Other purposes consistent with guidelines to be developed on use of money in the fund.
- Paying the agency's cost of administration.

House Bill 2399 identified the obligated party as the manufacturer, licensee, or importer that sells, offers for sale, distributes, or imports a fast-moving consumer good. Producers would be required to pay a set fee of \$150 per metric ton of packaging placed in the market in the state by the covered producer. The bill proposed phasing out after seven years with a built-in sunset date.

⁶ Those producing more than 10,000 metric tons internationally, or international gross revenue of over \$500 million.

⁷ Non-durable consumer goods packaged using a covered material, or covered material sold as a product instead of being used as packaging.

Since House Bill 2399 was not passed, and the expenditure for the use of the funds was not fully developed beyond what is described above, it is not possible to project the amount of funds that would have been generated and the allocations of those funds.

Other U.S. Jurisdictions

Though the concept of charging a set fee or tax on a product and using these funds in a direct manner to help manage the product is not new (e.g., Washington's Hazardous Substance Tax and the Litter Tax), to date other jurisdictions in the United States have not implemented fees to address the management of plastics or packaging. However, Washington introduced a bill that would have instituted a plastic tax (House Bill 1488 and Senate Bill 5129 in the 2021 session) discussed in Chapter 5.

The United Kingdom's Plastic Tax

The aim of the United Kingdom's Plastic Tax is to provide a clear economic incentive for businesses to use recycled plastic in the manufacture of plastic packaging, which will create greater demand for this material. In turn, this will stimulate increased levels of recycling and collection of plastic waste, diverting it away from landfill or incineration.

The Plastic Packaging Tax (PPT) took effect in the U.K. on April 1, 2022. It applies to manufacturers and importers of 'finished plastic packaging components'⁸ at a rate of approximately £200 (US\$239.40) per imperial ton⁹ of plastic packaging with less than 30% recycled plastic.

The tax allows an exemption for manufacturers and importers of less than ten imperial tons of plastic packaging per year and does not apply to any plastic packaging components meant for export from the U.K. within 12 months of their production or import. While plastic packaging components containing 30% or more recycled plastic are not chargeable for the tax, they still count towards the ten imperial ton threshold for packaging.

According to government figures, the U.K. Plastic Packaging Tax will generate approximately £247 million (US\$295.66 million) in revenue in its first year. It is estimated that approximately £10.5-£21 million is required to develop a new system to support this tax, and that £23 million will be needed for staff and other resource costs. This will leave a balance of approximately £203 million.

Government websites state that the tax and reformed packaging regulation will work in a complementary way to support the move towards a more circular economy. There is no definitive

⁸ A finished plastic packaging component is when the packaging has undergone its last substantial modification. Where the last substantial modification happens as part of the packing or filling process of the packaging, the component is finished after it has undergone the last substantial modification before that one.[17]

⁹ 2,240 pounds

explanation as to how this remaining revenue will be spent. It appears that all tax collected will go to general revenue.

Other European Jurisdictions

Other jurisdictions in the EU have introduced plastic taxes, including Italy and Spain. Tax revenues in both Italy and Spain, like the U.K., will go to general revenues, rather than a set fund dedicated to managing plastics.

Italy

In 2019, Italy passed a plastic tax on the use of manufactured single-use items, which have or will have the function of containing, protecting, handling, or delivering goods or food products (e.g., bottles, bags, food containers, Tetra Pak containers, packaging, rolls of pluri-ball plastic, commonly referred to as bubble wrap, and caps). The tax rate is set at €0.45/kg (US\$0.47/kg) of plastic. The implementation of the tax has been delayed several times since 2019. It was most recently expected to come into effect on January 1, 2023, but was postponed again in fall 2022, until further notice. Obligated parties include the manufacturer, the seller, the purchaser (if the items are bought from other EU countries and sold for business activity), the EU supplier (if the items are bought from other EU countries and sold to a private consumer), and the importer. The tax liability arises at the time of production or import.

Spain

In April 2022, Spain passed legislation to introduce a plastic tax as part of wider legislation to fight climate change and protect the environment. This tax was implemented on January 1, 2023. It includes an indirect tax on non-reusable plastic packaging, though exemptions are provided for certain types of medical products. The tax rate of €0.45/kg (US\$0.47/kg) of non-reusable plastic packaging is paid by the manufacturer or importers. It is expected to generate over €700 million (US\$738.15 million) in annual revenue for the government. The tax is chargeable to the manufacturer on the date on which the packaging is first delivered or made available to the acquirer. In the case of imports, the tax will become chargeable when the import duties become chargeable. In contrast to the U.K. plastic packaging tax, there is not a threshold of recycled content to exempt plastics from the tax.

Impact Assessment on Local Government Budgets and Funding

As with other funding models explored in this section, the impact on local governments can vary greatly. If a tax or fee is applied to plastics and/or packaging, this has the potential to generate a large revenue stream in the State. If these funds are allocated to general revenue, it is difficult to determine how a municipality may or may not benefit, and even more difficult to make assumptions by size or location of a community. However, the tax or fee may be allocated to a

specific purpose. The Hawaii bill proposed in 2022 had some set local funding uses and committed to develop further guidelines for funds based on the county-wide needs assessments.

If the goal of the tax or fee is to aid municipal collection of waste, this should be included in the bill, both at the onset and with the opportunity to further refine spending allocated to waste management based on needs assessments. Specific criteria could be considered for certain communities if that is the goal of the program.

Regionalized Hub and Spoke Systems

Regionalized systems, including hub and spoke systems, are not funding mechanisms per se, but these approaches can help address funding needs.


In Washington there are several programs that may lend themselves well to a more regionalized approach to waste management, particularly in remote areas of the state and for difficult-to-manage materials. Ecology has been promoting regionalized planning and created resources, such as MRF-shed maps, to support regional knowledge and understanding of access.¹⁰ Ecology has also started building a contract library to share with local jurisdictions to provide support when contracting with private companies. In addition, there has been some initial work underway to regionalize glass management in the Tri-Cities area.

Hub and spoke systems can be a good solution for a variety of materials, including recyclables and organics. There are also some private companies that offer innovation services for materials such as batteries, film, expanded polystyrene, and mattresses, that may support or complement existing and new programs – whether voluntary or regulated.

While not explored in the 2017 report, regional systems or ‘hub-and-spoke’ models for recycling have been used in rural areas of the U.S. These rural locations often struggle to operate a recycling program given the resources required to divert, market, and transport small amounts of materials long distances. The hub-and-spoke model consists of centralized processing centers (hubs) and surrounding communities (spokes) that feed the recyclables they collect to the main hubs.

Benefits of this system include reductions on the costs and amount of equipment, personnel, processing, transportation, and marketing. Hub-and-spoke models support greater economic efficiency by consolidating larger volumes of materials at a facility before sending them to markets. The systems are often dependent on external funding, such as grants, to develop the infrastructure needed and support ongoing collection efforts.

¹⁰ A MRF-shed includes all communities that feed recyclables into a single MRF.



Hub-and-spoke models have been used to some degree in many areas throughout the U.S., including New Mexico, Illinois, Texas, Colorado, and Michigan, all with varying degrees of success. The projects below highlight the funding, cost, and impact of these programs. They illustrate that funding for these programs is generally through a federal or state grant program. However, funds could be generated in other ways – for example, taxes and/or fees with a direct link to a fund, or as part of EPR packaging service provision.


While hub-and-spoke systems are good solutions to solve service issues in remote and rural areas, they often struggle to generate enough revenue from diverted material to fund the system. As these systems are successful in diverting material, they may impact government funding positively or negatively. There will likely be reductions in the amount of solid waste tipping fee funds, which will be more impactful to communities that rely on these funds, as well as associated savings to managing this material.

New Mexico

In one of the more extensive examples of hub-and-spoke projects, the New Mexico Recycling Coalition (NMRC) received \$2.8 million in 2010 to grow recycling infrastructure in rural parts of the state as part of the Americans for Responsible Recreational Access grant. Nearly \$2 million of this fund was sub-awarded to eligible rural and underserved communities, both cities and counties, to build recycling centers. This program produced four new and two vastly improved regional recycling hubs that accept recyclables from surrounding communities. Furthermore, the funding created over 40 new recycling drop-off sites, or spokes, in regions that previously had to travel long distances to participate in recycling. The New Mexico Environment Department also received approximately \$500,000 in similar federal stimulus funds that year. Utilizing both programs, New Mexico gained six new regional recycling processing hubs, improved two existing hubs, and funded more than 40 new drop-off locations, all in rural and underserved areas.

The program in New Mexico has received numerous grants to expand and improve on the services. Most of that funding supported equipment needs, such as balers and forklifts. Money has also supported NMRC's technical assistance program to support communities.

New Mexico's saw an increase in the diversion rate from 16.95% in 2010 to 19% in 2015, with a high of a 23% diversion rate in 2014. [9] Since 2015, the State of New Mexico is no longer reporting diversion rates. Of the original hubs supported at the onset of the program, 16 of 18 are still operational. Two discontinued providing services due to challenges with recycling markets in 2018 with the Chinese 'National Sword' Policy, which restricts the import of foreign recyclables. Of the 16 remaining hubs, 12 are rural and continue to process approximately 1,000 tons per year. The



other four hubs are more urban in nature and process closer to 30,000 tons per year. There are only two regions that currently do not offer the full range of traditional household recycling.

Actual ongoing costs were not tracked as part of the project. Communities have maintained the following recurring expenses: equipment maintenance; replacement signs; collection trailers for expansion of access; outreach and education; and labor. The more rural communities tend to fund these programs with tipping fee revenues.

West Tennessee Regional Recycling Hub

The Hub was created in 2010 with the goal for municipal governments, businesses, and other organizations to work together to increase the collection of post-consumer packaging materials for recycling and to divert waste from landfills. Owned by Chester County, the Hub is in a rural town over 100 miles from a major urban center. The Hub, a MRF that processes single-stream recyclable materials, received more than \$6.5 million in grant funding from the Tennessee Department of Environment and Conservation to help start the facility.

Despite its rural location, the Hub serves more than 350,000 residents and partners with 14 rural jurisdictions, 25 schools and colleges, and over 300 businesses. Local governments and non-profit organizations partner with the Hub to increase recycling and educate residents, businesses, and schools using campaigns about recycling, composting, landfills, and litter prevention.

With additional funding¹¹ from the Tennessee Department of Transportation in 2018, the Hub launched the Volunteer to Recycle campaign. The campaign originated from the Hardin County Solid Waste Department, with a goal to increase recycling and decrease contamination in rural counties, cities, businesses, and residential recycling. Some of the Hub's partnerships share the Volunteer to Recycle campaign and educational programs to educate the community. Since 2010, the Hub has formed effective partnerships working toward the common goal of increasing recycling, environmental education and outreach, and waste diversion.

When the Hub began operations in 2010, it processed approximately 3,000 tons of recyclables per year. It has grown significantly since the program launched and is now processing around 7,000 tons per year.

Funding for the Hub is generated from commodity revenues, as well as a tip fee charged to cities, counties, and businesses that use the facility, at a rate of \$50 per ton. For comparison, landfill tip

¹¹ Approximately \$400,000

fees range between \$41-\$55 per ton and the tip fee at a larger recycling facility in Memphis is \$200 per ton for recycling. Residents are not charged a fee to drop off materials.

Impact Assessment on Local Government Budgets and Funding

Regionalized recycling systems, including hub-and-spoke, can have immense benefits for rural and remote communities with smaller populations, and therefore less population density and less likelihood of being near convenient transportation corridors. These communities face the greatest challenges in generating enough recyclable materials to send to markets, as well as reasonable proximity to markets. Most regionalized recycling systems use grant money to invest in initial program development. Some programs have developed sustainable funding models and continue to be self-sufficient through the use of fees to supplement commodity sales, while others have not been successful in building a sustainable model and, without state or other funding subsidies, have failed. Like EPR and DRS, communities may also see a decline in tipping fee revenue from these materials; however, the benefits are likely to outweigh the costs.

Statewide Technical Assistance Programs

Statewide technical assistance programs are not a funding mechanism per se, but services provided by the state can reduce the funding needed by local governments to provide these services.

Many states have established technical assistance programs to support local waste management programs and supplement the need for local funding. Depending on the level of investment by the state, these programs may include grant offerings, free educational resources, campaign materials, templates and toolkits, or consultation services and expertise.

Ecology maintains a statewide technical assistance program to serve local governments through direct outreach and centralized funding. Principally, Ecology's Local Solid Waste Financial Assistance (LSWFA) Program Grants allocate an average of \$24 million each biennium to support local governments' solid and hazardous waste related planning, implementation, and regulatory enforcement efforts when fully funded. Ecology's technical assistance program staffing estimates include, but are not limited to:

- 9 staff members who provide support for local planning, as well as grant disbursement and management.
- 3 staff members who provide waste reduction and recycling support, including implementation of state-level waste reduction laws (such as the state's single-use plastic carryout bag ban) and recycling campaigns.
- 4.5 litter coordinators who provide grants for litter clean-up on local roads, coordinate clean-up on state roads, and run litter prevention activities.
- 4.6 facility specialists who ensure that public and private solid waste facilities are operating within regulations and assist local governments with household hazardous waste facilities.
- 4 hydrogeologists and 2.3 engineers who help monitor both active and closed landfills, assess construction of new facilities, and oversee landfill clean-ups.

- 1 data analyst who gathers and tracks data on waste disposal and recycling, including on a county level.
- 1 staff person who coordinates waste tire pile clean-ups across the state.

In this report, we assess other robust and transparent technical assistance programs implemented by North Carolina, Massachusetts, and Minnesota as mechanisms to supplement or reduce the financial burden on local solid waste systems. Though these three state programs diverge from Washington’s current model in different ways, this should in no way be interpreted as a recommendation to make immediate changes to Washington’s program. Further analysis of Washington would be needed to evaluate the benefit of the example statewide technical assistance programs presented in this section and their impact on local governments.

In summary, both North Carolina and Massachusetts provide technical assistance programs through their state staff, and offered multiple grant programs in 2022 that spanned diverse areas of waste management including multi-family recycling, pay-as-you-throw programs, and food waste. While these two states offer many of the same services in terms of funding and education, their programs operate differently in terms of evaluation, funding sources, and distribution. The Massachusetts program, for instance, demonstrates how states can influence local policy through grant eligibility criteria. That is, the state often requires that municipal grant applicants have certain ordinances or bylaws related to recycling in place before they can be eligible for funding. This model particularly contrasts the local control that counties are required to take for solid waste in Washington, demonstrating the push and pull between local and state governments, and how the two can influence each other. While Minnesota offered fewer complex grant opportunities in 2022, the state manages a unique technical assistance program through retired professionals, also representing a different option for state resource allocation.

North Carolina

Financial Assistance

North Carolina’s Solid Waste Outreach Program is administered by the N.C. Division of Environmental Assistance and Customer Service (DEACS). This is a non-regulatory division of the State Department of Environmental Quality which receives annual appropriations from the General Assembly to fund the technical assistance program. Since 2013, these appropriations have been fixed at \$1.1 million per year. Table 5 summarizes four grant programs that were available to municipalities, counties, recycling businesses, non-profits, and/or multifamily property owners/management companies in 2022.

Table 5. North Carolina Grant Programs, 2022

Grant Program	Funding Amount	Funding Applications	Eligibility Criteria
Community Waste Reduction and Recycling Grant Program (CWRAR)	Priority Projects: up to \$40,000 Distributed on reimbursement basis + required cash match of 20%	Site development, facility construction, equipment or vehicle purchases, equipment installation, educational handouts	Local governments may apply to fund the development of a cart-based curbside collection system, conduct outreach enforcement (contamination tagging), establish/expand glass collection, or establish permanent HHW programs open at least four days/year.
Community Waste Reduction and Recycling Grant Program (CWRAR)	Standard Projects: up to \$30,000 Distributed on reimbursement basis + required cash match of 20%	Site development, facility construction, equipment or vehicle purchases, equipment installation, educational handouts	Local governments may apply to fund any project that increases or enhances public waste reduction and recycling. For example: drop-off infrastructure, collection/consolidation vehicles, education/outreach initiatives, C&D recycling, electronics or HHW recycling.
Multifamily Recycling Grant Program	\$25,000 up to \$250,000 Distributed on reimbursement basis + required cash match of 10%	Typical equipment needs to start or expand multifamily recycling such as carts, dumpsters, collection vehicles, concrete pads, and recycling corrals as well as supplemental educational materials.	Local governments, recycling businesses or non-profits, and multi-family property owners or management companies may apply to fund projects that create NEW access and/or NEW recovered tonnage from multifamily residences that will collect all or most of the traditional household recyclable stream.
Food Waste Reduction Grant	Up to \$80,000 Distributed on reimbursement basis + required cash match of 10%	Site development costs, construction of facilities to handle wasted food, equipment or vehicle purchases, equipment installation costs, and supplementary educational material costs.	Local governments, non-profits, and businesses may apply for funding to develop food waste reduction infrastructure by expanding food donation networks or composting operations, including collection and hauling.

For each program, grant funds may not be applied towards employee salaries, land acquisition costs, or administrative expenses including overhead, utilities, or work/studies performed by consultants. Grant funds may also not be used to cover material collection costs charged by contracted haulers or other vendors.

North Carolina also funds solid waste management programs and services at the city and county level through the Solid Waste Disposal Tax. The state collects an excise tax of \$2 per ton of municipal solid waste and construction and demolition debris disposed in landfills. The Department of Revenue distributes proceeds to eligible local governments on a per-capita, quarterly basis. [10] While these funds are distinct from grants, a jurisdiction may use them to match grant funds. CWRAR grant applicants must certify in writing that all disposal tax proceeds are only to provide solid waste and recycling services, describe how they are currently utilized, and whether they will be used to supply matching funds. [11]

Technical Assistance

The Division is comprised of 35 staff members with diverse professional backgrounds and areas of expertise. Program staff are equipped to host meetings, trainings, presentations, and small focus groups with local government leaders and decision makers to offer information, advice, and other technical support in the following areas:

- Optimizing community recycling programs.
- Changing service frequency.
- Changing drop sites.
- Adding curbside composting.
- Making budget cuts and adjustments.
- Identifying and designing anti-contamination strategies, such as cart-tagging programs.
- Restructuring service contracts for recycling, electronics, fluorescent lights, and other special wastes.
- Enhancing educational messaging.
- Monitoring local, state, and national recycling policy changes.
- Mapping MRF-sheds. [12]
- Locating markets for recyclable materials.

DEACS staff also conduct ongoing research and can provide information on the following topics:

- Local budgeting strategies.
- Recycling markets and commodity pricing.
- MRF operations.
- Best recycling program practices based on North Carolina annual reporting data.

Other Resources

In addition to technical and financial assistance, the division makes the following tools available for free on their website:

- Recycling Markets Directory of recycling companies that collect, transport, broker, process, or remanufacture recovered materials in North Carolina.
- Full-cost accounting tool which can be used to set user fees or inform general fund appropriations to cover the full costs of operating and sustaining waste management programs.
- Ready-to-use recycling education and outreach tools for local governments, recycling haulers, and other organizations or individuals. Printing and distributing these materials is not free, though they may be covered by grant funding.
- A social media toolkit with ready-to-post photos and infographics.
- Generic outreach materials including posters, ads, and flyers.
- Graphic design services to customize outreach materials with specific program and contact information.

Massachusetts

Financial Assistance

The Massachusetts Department of Environmental Protection (MassDEP) also has a robust technical assistance program termed the Sustainable Materials Recovery Program (SMRP). The department funds the program's grant activities through Waste Energy Credits (WECs) earned by six municipal waste combustors in the state. According to Massachusetts's Green Communities Act, 50% of the WEC revenue must be applied to MassDEP-approved recycling programs.

Table 6 summarizes 2022 SMRP local funding resources, including four municipal grants and the Recycling Dividends Program. While some eligibility criteria vary by grant, all SMRP grant applicants must meet minimum criteria.

Table 6. Massachusetts Sustainable Materials Recovery Program Funding Opportunities, 2022

Funding Opportunity	Funding Amount	Funding Applications	Eligibility Criteria
Regional Small-Scale Initiatives	\$1,000-\$2,000 based on population.	Activities and equipment to enhance waste reduction program performance.	Available to regional entities with a core mission of solid waste/recycling management.[13]
Pay-As-You-Throw (PAYT) Assistance	Between \$5 and \$30 per household depending on program characteristics and implementation status up to \$300,000.	May offset approved start-up costs including but not limited to bags, carts, educational materials, and program coordinators, funding may not be used to cover disposal or processing.	Available to municipalities implementing or updating a curbside, drop-off, or pay-as-you-throw (PAYT) program that have adopted a policy requiring that private haulers provide residential solid waste and recycling services for one bundled price.
Wheeled Organics Carts	\$20 per household up to \$100,000 + \$1 per cart (for in-molded labels and stickers) up to \$5,000. For pilot programs: \$10 per household up to \$10,000.	May offset the cost of carts purchased by the municipality or its contracted organics hauler so long as the municipality's hauler contract specifies that the municipality takes ownership of the carts at the end of the contract.	Available to municipalities purchasing carts off State Contract or with at least 30% recycled content. Carts must be at least ten gallons in capacity and under warranty for at least five years.
Wheeled Recycling Carts	\$20 per household up to \$200,000 + \$1 per cart (for in-molded labels and stickers) up to \$10,000.	May offset the cost of carts purchased either by the municipality or by its contracted recycling hauler so long as the municipality's contract with the hauler specifies that the municipality takes ownership of the carts at the end of the contract.	Available to municipalities that limit household trash collection to 35 gallons or less. Carts must be purchased off State Contract or with at least 30% recycled content. Carts must meet certain standards for automated collection, capacity (based on collection frequency), and warranties.

Funding Opportunity	Funding Amount	Funding Applications	Eligibility Criteria
Recycling Dividends Program	Basic level: \$245-\$7,000. Advanced level (or Environmental Justice populations): \$350-\$10,000. [14] Point-system assesses the extent to which best-practice recycling programs already exist to determine funding level.	Designated activities and equipment that will enhance waste reduction program performance.	Available to municipalities seeking funding assistance for existing recycling and waste management programs. The more recycling infrastructure a municipality has, the more funding they are eligible for, though funding is application-based, not automatically distributed.

Technical Assistance

Apart from grants, municipalities may also apply for up to 80 hours of technical assistance from a MassDEP Municipal Assistance Coordinator (MAC) for a single recycling/waste reduction project. This project should address a high-priority recycling, solid waste, or PAYT program issue to which the community is willing and able to commit its own staff. MAC areas of expertise include:

- Solid waste and recycling contracts.
- Developing waste reduction and recycling programs for municipalities.
- Supporting new program roll-out.
- Recycling and waste reduction best practices and education.
- Recycling and waste prevention grant opportunities.
- Contamination reduction programs.

Resources and staffing are divided among eight MAC districts in the state and applications are accepted on a rolling basis.

Other Resources

Outside of SMRP, MassDEP also offers a Recycling IQ Kit. Similar to that of North Carolina, the kit is a free, web-based resource that local jurisdictions can use to educate residents on recycling contamination, provide contamination feedback, and track the progress made towards reducing contamination through these efforts. Resources include digital infographics and templates as well as “oops” tags and stickers available for download. MassDEP also provides free template editing instructions and a community recycling assessment tool that may be used to evaluate current recycling programs and best next steps. In previous years, the department has also made Recycling IQ Kit grants available, though that program is currently suspended.

Minnesota

Financial Assistance

The Minnesota Pollution Control Agency (MPCA) made available over \$1 million in grant funding for reuse, recycling, and composting projects to counties, cities, townships, and tribes located outside of the Twin Cities metro area in 2022.

The grant program is funded by an appropriation from the legislature and is renewed biennially. The revenue is generated through the Solid Waste Management Tax collected on solid waste management service providers. [15] The tax is intended, in part, to fund local recycling activities. Table 7 provides additional information on the grant funding.

Table 7. Minnesota Pollution Control Agency Grant Funding, 2022


Grant Name	Funding Amount	Funding Applications	Eligibility Criteria
Greater Minnesota Recycling and Composting Grant	\$150,000 - \$250,000 per project (Distributed on reimbursement basis) + required cash match of 25%.	Researching, developing, staffing, or implementing projects that increase the efficiency or effectiveness of reuse, recycling, or composting programs. Equipment costs may be covered on a case-by-case basis.	Minnesota counties, cities (with a population of less than 45,000), townships, and Tribes located outside of the Twin Cities metro area may apply.

Technical Assistance

MCPA also provides funding and administrative oversight for the Minnesota Retiree Environmental Technical Assistance Program (RETAP). This program employs skilled, retired engineers, scientists, managers, or other professionals who have worked in Minnesota business, industry, or education with 30 to 40 years of experience. They have been trained in conducting pollution prevention, waste reduction, and energy conservation assessments. The RETAP team:

- Analyzes utility bills.
- Visits the facility.
- Recommends behavior changes, maintenance improvements, and/or retrofits.
- Prepares a written report with estimated financial and environmental savings.

Between 2017 and 2019, RETAP professionals completed 66 assessments identifying over \$130,000 in total cost saving recommendations. In this time period, 92% of clients indicated completed or planned follow-through of RETAP recommendations. [16]



RETAP program funding is available through the state's Environmental Fund, which is fed in part by the Solid Waste Management Tax, a tax collected by solid waste providers including haulers, facilities, and local governments or other political subdivisions on the provision of services related to solid waste disposal. The tax rate varies by waste type and generator.

Impact Assessment on Local Government Budgets and Funding

Statewide technical assistance programs can benefit any community, depending on the framework put in place for the use and availability of the assistance being offered. Such programs may prove most impactful to small or rural communities that may not have the fiscal resources and/or staff expertise to oversee solid waste programs and services for the jurisdiction. As with other funding and support mechanisms, a statewide technical assistance program can be tailored to support communities of any size and location. For example, the Greater Minnesota Recycling and Composting Grant was only available to Minnesota counties and cities with a population of less than 45,000, townships, and tribes located outside the Twin Cities metro area. The provision of these services to small and/or rural jurisdictions can also support a state's efforts to address environmental justice and issues related to access and participation from underserved communities in Washington.

Glossary

Term/Acronym	Definition
Access	Generally defined by how a household or business engages a county’s solid waste system to manage waste (i.e., MSW, recyclables, yard debris, HHW). Access to waste services typically occurs at or near the property (“curbside”) or at a solid waste facility where a household transports or “self-hauls” their waste. Self-haul facilities may include transfer stations, drop-off centers, and drop boxes. Curbside collection service provides the highest level of access to waste services because it is the most convenient for a household. Self-haul facilities do provide access to waste services, but they are less accessible compared to curbside collection.
AWC	Association of Washington Cities
Capture rate	See ‘recovery rate’
Cascadia	Cascadia Consulting Group
CLCP	Community Litter Cleanup Program (grants)
Commercial	Any property intended for business operations such as office buildings, shops, retail malls, and hotels.
Commercial Container	A detachable receptacle (normally designed to hold at least one cubic yard) from which materials are collected by mechanically lifting the receptacle and emptying the contents into a collection vehicle.
Construction and Demolition (C&D)	Materials resulting from the alteration, construction, rehabilitation, or repair of any human-made structure, including but not limited to houses, buildings, industrial or commercial facilities, and roadways.
Cost Scale – Low, Medium, High	Low, medium, and high costs are set at the 1st quartile, median, and 3rd quartile of the applicable cost data.
Curbside Collection	A service provided to households and businesses for the disposal of refuse, recycling, and yard debris. Residents in some areas may be mandated to provide or receive this service. In other areas, residents may have a choice to sign up if available (e.g., subscription).
Curbside Collection Recyclables	Refers to curbside collection of source-separated recyclables for recycling.
Curbside Collection Yard Debris	Refers to source-separated curbside collection of yard debris for composting or other forms of organics processing.

Deposit Return System (DRS)	A surcharge is placed on a product when purchased and a rebate is provided when the product is returned to a designated site for recycling; also known as Bottle Bills.
Drop Box	An unstaffed receptacle at a permanent location into which refuse, recycling, or yard debris can be deposited.
Drop-off Station	A site where self-haul waste is sorted and collected in preparation for transport to a transfer station, processing, or landfill. Drop-off stations serve as small-scale transfer stations designed to provide access to self-haul customers. Drop-off stations do not generally accept waste from a private waste hauling company.
Ecology (ECY)	Washington State Department of Ecology
Enterprise Fund	A self-supporting government account that is mainly funded by fees charged to external users (such as collection or tipping fees) that pay for goods or services provided to those users (such as solid waste management services).
Environmental Justice (EJ)	The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.
Extended Producer Responsibility (EPR)	EPR programs require manufacturers and importers of covered products to fund the cost of collection and recycling and to manage the handling of recovered materials. They shift the financial costs of managing products at the end of their useful life from individual disposers and the public sector to product manufacturers.
FCS	FCS Group
Food Waste	Includes but is not limited to excess, spoiled, or unusable food and includes inedible parts commonly associated with food preparation such as pits, shells, bones, and peels. "Food waste" does not include dead animals not intended for human consumption or animal excrement.
Hazardous Substance Tax (HST)	The HST is a 0.7% tax on the wholesale value of taxable hazardous substances (petroleum products, pesticides, and certain chemicals) that is levied on the first possessor in Washington State.
Household	A household consists of all the people who occupy a housing unit. A house, an apartment or other group of rooms, or a single room, is regarded as a housing unit when it is occupied or intended for occupancy as separate living quarters – that is, when the occupants do not live with any other persons in the structure and there is direct access from the outside or through a common hall.

Household Hazardous Waste (HHW)	Household hazardous waste. Includes any item that may harm the environment or human health, such as paints, stains, cleaning chemicals, pesticides, automobile products, etc.
Interlocal Agreement (ILA)	Refers to an agreement between two local governments, such as a city and a county.
Jurisdiction	Referring to a territory or activity of interest, including both counties and cities.
Large City	100,001 or more people
Large County	500,001 or more people
Litter Tax	The Litter Tax (chapter 82.19 RCW) is an excise tax of 0.015% on the value of products deemed likely to become litter. Examples of taxed products include fast food packaging, tobacco products, soft drinks, beer and wine, newspapers, and containers made from various materials; the taxable products list has not been adjusted since the law was first created in 1971.
LSWFA	Local Solid Waste Financial Assistance (grants)
Material Recovery Facility (MRF)	Material recovery facilities are facilities that process recyclable materials.
Medium City	50,001-100,000 people
Medium County	100,001-500,000 people
MRF-shed	Includes all communities that feed recyclables into a single MRF.
MRW	Moderate-risk waste includes household hazardous waste (HHW) and small quantity generator (SGQ) wastes from businesses.
Municipal Solid Waste (MSW)	Commonly known as trash or garbage. It includes non-hazardous disposable materials.
Municipality	A town or district that has a local government.
Non-residential	Any property not designed for people to live in.
Pay-As-You-Throw (PAYT)	Variable rate pricing policy whereby a customer is charged for the amount of trash they throw out rather than a flat rate.
Permanent HHW Facility	A fixed facility rather than a HHW collection event.
PPP	Packaging and paper product.
PPG	Public Participation Grants

Producer Responsibility Organization (PRO)	An organization that assumes the responsibilities of an obligated party as outlined in government regulations regarding the collection and recycling of products.
Recovery Rate	The amount of material that is not discarded in landfill or waste-to-energy, divided by the total amount generated.
Recyclables	Materials or products that can be used again after being treated or processed.
Representative Jurisdictions	In lieu of analyzing every city and county across the state, data from a predetermined set of 12 cities and 12 counties was modeled to determine provision of services and fiscal impacts from policies. Representative cities include the cities of Bellingham, Leavenworth, Marysville, Port Angeles, Richland, Seattle, Spokane, Tacoma, Vancouver, Wenatchee, Winthrop, and Walla Walla. Representative counties included in the modeling of policy proposal impacts include Chelan, Clallam, Cowlitz, Island, Kitsap, Kittitas, Lincoln, Pierce, Skagit, Spokane, Yakima, Lincoln, and Walla Walla.
RRS	Resource Recycling Systems
Rural	Rural: areas outside of cities/towns with low population density (<100 people per square mile). The rural designation is based on population criteria from RCW 82.14.370 used to identify counties for rural area assistance.
Self-haul	Waste that is hauled to a transfer or disposal facility by someone other than a private waste hauling company, or by someone whose primary business is not waste hauling.
Self-haul Facility	A drop-box, drop-off center, transfer station, or disposal facility that receives self-haul waste.
Self-haul Recyclables	Refers to source-separated collection of recyclables at a self-haul facility for recycling.
Self-haul Yard Debris	Refers to source-separated collection of yard debris at a self-haul facility for composting or other forms of organics processing.
Service Offered	Residents have the option to opt into the service for “free.” Cost of service is included in other items, such as recycling costs being included in garbage fees.
Service Required	Residents must participate in service. Failure to do so results in a fine.
Service Subscription	Residents may opt into the service for an additional cost.
Small City	A city with fewer than 50,000 people.
Small County	A county with fewer than 100,000 people.

Small Quantity Generators (SQGs)	Businesses that generate fewer than 220 pounds of moderate risk waste in any month. Ecology further defines SQGs as businesses in Washington that generate fewer than 220 pounds of dangerous waste, or fewer than 2.2 pounds of certain kinds of highly toxic waste, in any month. SQGs may accumulate up to 2,200 pounds (or up to 2.2 pounds of waste regulated at the 2.2 pound limit).
Solid Waste Collection Tax (SWCT)	The SWCT is a 3.6% excise tax on collection charges for solid waste disposal. It 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.
Stewardship Organization (SO)	An organization comprised of interested partners responsible for oversight of a specified producer/product's impact on the environment and human health and safety. Used to describe a not-for-profit corporation or organization that is appointed by a producer to act as an agent on behalf of the producer to administer a product stewardship program.
Sustainable Rate Structures	Sustainable rate structures must balance the relatively fixed costs of providing service – such as providing a container, conducting education and outreach, and account administration – with the variable usage costs, such as tip fees for disposing or processing waste.
Suburban (City)	Any city in the state that has a population less than 50,000. This definition is unique to this study and is generally based on the US Census Bureau definition for an urban cluster. Urban clusters are defined as urbanized areas containing at least 2,500 and fewer than 50,000 people. Because some cities and towns in Washington have fewer than 2,500 people, the minimum population criteria for an urban cluster are not applied in this analysis.
Suburban (County)	County with 100 or more people per square mile.
Transfer Station	A site where refuse, recyclables, yard debris, and other waste types are collected and sorted in preparation for processing or landfill.
Urban (City)	Any city in the state that is not rural and has a population of at least 50,000. This definition is unique to this study and is based on the US Census Bureau definition for an urbanized area.
Utilities and Transportation Commission (UTC)	The Washington Utilities and Transportation Commission provides regulatory oversight of solid waste haulers that provide collection services in state-regulated service areas. The UTC does not regulate collection services within cities and towns that provide collection services or contract for such service.
Utility Fund	A self-supporting government account that is mainly funded by fees charged to external users (such as collection or tipping fees) that pay for goods or services provided to those users (such as solid waste management services).

Utility Tax	Taxes levied on the gross operating revenues earned by private and public utilities from operations within the City limits, including the City's own municipal utilities. Utilities on which taxes are levied include electric, water, sewer, solid waste, storm water, ambulance, gas, brokered natural gas, telephone and cable TV. These taxes represent a stable revenue source but can be impacted by a number of different factors, including the economy, technology, utility rate changes, weather and other fluctuations that impact a utility's ability to generate revenue.
WACSWM	Washington Association of County Solid Waste Managers
Wasted Food	Food that is disposed of that is still edible.
White Goods	Large home appliances such as refrigerators and washing machines.
WRRED	Waste Reduction, Recycling, and Education (grants)
Yard Debris	Decomposable waste materials generated by yard and lawn care and includes leaves, grass trimmings, brush, wood chips, and shrubs.

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