Funding Mechanisms for Solid Waste

June 30 2017 (FINAL)

Part 3. Recommended Funding Mechanisms

Executive Summary

To help address concerns reported by local governments and other stakeholders regarding how to strengthen the state's funding system for solid waste management, the Washington State Department of Ecology contracted with Cascadia Consulting Group (Cascadia) to research potential options. Cascadia partnered with FCS GROUP and Abbe and Associates to conduct this research in three parts:

1. Update current funding mechanisms used in Washington State.
2. Identify potential funding mechanisms to consider.
3. Recommend funding mechanisms for Ecology to consider.

To identify mechanisms used both in Washington State and elsewhere (across the United States and internationally), Cascadia Consulting Group reviewed previously published papers, conducted web-based research, surveyed stakeholders, and conducted selected interviews.

Drawing on the research, surveys, and interviews, Cascadia identified a shortlist of potential new mechanisms or possible adjustments to existing mechanisms for further consideration. This selection was based on existing and potential funding mechanisms that appeared most promising in terms of financial strength, financial stability, environmental sustainability, social sustainability, and feasibility.

Cascadia then conducted a second survey of solid waste stakeholders in Washington regarding the shortlist of potential mechanisms to obtain feedback about anticipated benefits and challenges. Based on stakeholder feedback, as well as an assessment of each mechanism's financial strength and stability, nexus with solid waste, feasibility, implementation experience (in Washington or elsewhere), and environmental and social sustainability, Cascadia developed recommended funding mechanisms and next steps for Ecology.

Overall, Cascadia recommends adjusting several existing state-level mechanisms—primarily to ensure funds are either directed or redirected to solid waste uses. In addition, Cascadia recommends providing support to cities, counties, and local boards of health so that local governments consider and can use the full range of authority to raise revenue available to them. Recommendations are summarized on the next page and described in more detail in the remainder of this report.

State-Level Funding Recommendations

Solid Waste Collection Tax

- Work to dedicate existing tax revenues to solid waste purposes, or to raise the tax and dedicate the increase to solid waste purposes.
- Consider expanding the tax to cover additional material streams (potentially at differential rates).

Hazardous Substance Tax for Coordinated Prevention Grants (CPG)

- Work to re-dedicate funding to waste-related purposes in the form of Coordinated Prevention Grants.
- Consider a temporary surcharge on the Hazardous Substance Tax to help stabilize funding when revenues drop below a specified amount (proposed through SB 5501 and HB 1663 in 2017 legislature).

Litter Tax

- Work to re-dedicate funding to solid waste, litter, and clean-up.
- Update the list of covered products to make sure it reflects items that are littered.

Extended Producer Responsibility (EPR)

- Seek to expand statewide EPR for hard-to-handle and hazardous products, potentially printers and peripherals, medicine, paint, mattresses, batteries, household hazardous waste, and/or appliances with refrigerants.
- Monitor the effectiveness and stakeholder impacts of packaging and printed paper programs elsewhere for potential future consideration.

Local-Level Funding Mechanisms

Cascadia recommends that Ecology supports training to cities, counties, and local boards of health on how to apply the existing, flexible options available to them to provide sustainable funding. Cascadia also recommends that local governments consider or reconsider whether these funding mechanisms could help meet their 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.

Study Overview

During the Washington State Department of Ecology's recent update of the State Solid and Hazardous Waste Plan, local governments and other stakeholders expressed concerns regarding how to strengthen the state's funding system for solid waste management. To help address those concerns, the Department of Ecology contracted with Cascadia Consulting Group to research potential options. Cascadia partnered with FCS GROUP and Abbe and Associates to conduct this research in three parts:

1. Update current funding mechanisms used in Washington State.
2. Identify potential funding mechanisms from elsewhere to consider.
3. Recommend funding mechanisms for Ecology to consider.

This study builds on previous research conducted or commissioned by Ecology and summarized in the following reports:

- *Financing Solid Waste for the Future: Background Paper for Beyond Waste (2004)*
- *Solid Waste Management Cost Flows in Washington State (2007)*
- *Revenue Sources to Fund Recycling, Reuse, and Waste Reduction Programs (2011)*

In Part 1 of the current project, Cascadia Consulting Group (Cascadia) identified and assessed solid waste funding mechanisms currently used in Washington State by reviewing previously published papers, conducting web-based research, and conducting selected interviews. Cascadia also conducted a web-based survey of Washington's solid waste stakeholders regarding funding gaps and potential new mechanisms that could be used.

In Part 2, Cascadia and Abbe and Associates expanded the review of previously published papers and web-based research to identify funding mechanisms used elsewhere in the United States and internationally. FCS GROUP drew on its extensive experience with funding mechanisms and rate structures for solid waste, drinking water, wastewater, electricity, and stormwater utilities to develop guidance for rate-setting for solid waste funding.

In Part 3, Cascadia developed a list of potential recommendations (new funding mechanisms or adjustments to existing mechanisms). This selection was based on existing and potential funding mechanisms that appeared most promising. Cascadia then surveyed stakeholders regarding the shortlist of potential recommendations to obtain their feedback on the top benefits and drawbacks of each option and developed a final set of recommendations and next steps. Final recommendations were based on the following criteria: financial strength and stability, solid waste nexus, stakeholder feedback, feasibility, implementation experience (in Washington or elsewhere), and environmental and social sustainability.

This paper reports on Part 3, recommended funding mechanisms and next steps. Background research documents from Parts 1 and 2, along with a summary of the stakeholder surveys conducted in Parts 1 and 3, and a database of all the mechanisms studied, are presented separately as associated study documents.

Summary of Stakeholder Engagement

Cascadia engaged solid waste system stakeholders in Washington through two web-based surveys. Respondents to both surveys represented a broad cross-section of the solid waste industry by geography, organization type, solid waste material (e.g., garbage, recycling, household hazardous waste), and part of the solid waste system (e.g., collection, education). In total, 127 stakeholders responded to the first survey in December 7–23, 2016, by providing information on new and innovative mechanisms that their jurisdictions had implemented or considered, their most pressing gaps in funding and funding mechanisms, and additional resources or ideas to guide the Cascadia team's research in Parts 1 and 2 of this project. The second survey received 112 responses and was conducted April 3–21, 2017. This survey asked respondents to identify benefits and drawbacks to the most promising state- and local-level funding options that the Cascadia team identified in Parts 1 and 2 of this project.

Overall, across multiple funding options, respondents to the second survey identified increasing revenue and increasing incentives to divert waste as top benefits of the funding options. The most commonly mentioned drawbacks were the potential to increase cost to customers, lack of political will required to implement options, and the potential for state-level funding to be redirected to other uses. Political will included responses mentioning resident and business complaints, industry lobbying, and other anticipated public pushback to implementation of proposed mechanisms.

In several comments, respondents also expressed concerns that increasing the costs of disposal would contribute to illegal dumping; however, research does not support this assertion. The research on costs as a driver of illegal dumping is inconclusive, though the U.S. Environmental Protection Agency and many U.S. municipalities take the view that increasing the cost of garbage disposal is not a driver for illegal dumping if implemented in combination with effective enforcement and education.[1,2] In general, literature supports that lack of alternative disposal options (such as distance to a transfer station) is a driver of illegal dumping and that increasing enforcement activities or penalties for illegal dumping is an effective deterrent.[3,4,5,6]

Key Findings

Overall, the following themes emerged from the three parts of this study:

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

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

Flexible city and county mechanisms exist but may be underutilized by municipalities.

- **Cities** have the authority to provide collection directly or to establish waste contracts for collection (Revised Code of Washington 35.21.120) that may also include education, litter clean-up, or other services. Contracts can include administrative and other fees or surcharges to support city-provision of other waste system components, such as enforcement, planning, or post-closure landfill activities.
- **Counties** have the authority to establish a solid waste disposal district with the power to charge excise taxes (RCW 36.58.100-150). Counties also have the authority to establish a solid waste collection district to mandate collection (RCW 36.58A) and set minimum standards for collection and solid waste handling (RCW 70.95.090-092) in unincorporated areas.
- **Local boards of health** have the authority to establish and enforce regulations that protect public health and to establish fee schedules for services provided (RCW 70.05.060). These fees and services can include hazardous waste programs.

State funding has been reduced due to redirections of historic funding sources by the Legislature, oil-price volatility (which affects tax receipts), and a lack of dedication of the Solid Waste Collection Tax to the solid waste system.

- State-level funding supports grants that are a key source of funding for local governments, particularly for rural and Eastern Washington communities.
- The Solid Waste Collection Tax has historically been used to fund loans for public infrastructure (through the Public Works Trust Fund), but it has not been dedicated to solid waste infrastructure.[7] Furthermore, the tax has been redirected away from the fund since 2011.[8]
- Coordinated Prevention Grants, which provide grants from the state to local governments, have been reduced by nearly half of historic levels primarily due to decreased Hazardous Substance Tax receipts and redirection by the Washington State Legislature of funds to non-waste activities previously funded by the General Fund.[9]
- Starting in 2009, redirections of Litter Tax funds forced the Department of Ecology to suspend certain litter programs and to cut staff work on waste reduction and recycling.[10]

A primary new approach used in other states and countries is extended producer responsibility (EPR) for targeted hard-to-handle products, such as paint, to more common recyclable products, such as packaging and printed paper.

- Washington State and individual counties have already enacted EPR for limited categories of products, including certain electronics, mercury-containing lights, and pharmaceuticals.
- Jurisdictions in Canada and Europe have successfully used this mechanism to fund collection and education for covered materials. For example, British Columbia's EPR program has achieved a 77% recovery rate for products covered by the Recycle BC program.

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

- 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.
- Rate structures that provide "free" recycling and composting incentivize recovery but inaccurately present the true costs of each service to customers.

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

- Sales taxes have no direct nexus with solid waste, are regressive, and have state law caps.
- Property taxes have state law caps and are already used for many other purposes.
- Real estate excise taxes have no direct nexus with solid waste and vary with real estate markets.
- General fund revenues are less reliable than dedicated funding sources.

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

Recommendations

Cascadia's recommendations for solid waste funding mechanisms are based on published papers, web-based research, and feedback from surveyed stakeholders. All mechanisms to raise fees or taxes will present political challenges, and mechanisms with a proven track record and direct connection to solid waste generally have a stronger case for success. As a result, the study focused recommendations on mechanisms that:

- Have a precedent for use somewhere in Washington State.
- Are directly connected to solid waste (e.g., sustainable solid waste rate structures and tip fees instead of fees and taxes on real estate to pay for solid waste).

Overall, Cascadia's recommendations are based on the following criteria:

- Financial strength and stability
- Solid waste nexus
- Stakeholder feedback
- Feasibility
- Tested mechanism
- Environmental and social sustainability

Mechanisms grounded in two criteria in particular—solid waste nexus and tested mechanism—are expected to be able to garner the strongest support when working to secure scarce funding dollars.

Statewide Mechanisms

Statewide funding mechanisms offer some advantages in comparison with local funding mechanisms. In particular, statewide mechanisms can:

- Fund activities at the state level through Department of Ecology programs.
- Pool revenues from across the state into a fund that local entities can request to borrow from when they need a large loan for infrastructure.
- Pool funds from across the state to help economically challenged jurisdictions.

However, a drawback to statewide mechanisms is the potential for the state legislature to redirect funding elsewhere, which is a primary challenge to statewide solid waste funding mechanisms today. Several statewide funding mechanisms—such as the Litter Tax and solid waste collection tax—currently levy charges on waste-related activities, but only a portion of the funding collected is used for solid waste programs.

Cascadia is proposing adjustments to the following existing statewide mechanisms:

- Solid Waste Collection Tax
- Hazardous Substance Tax
- Litter Tax
- Extended producer responsibility

Specific recommendations for each mechanism are provided in the sections that follow. Other existing statewide funding mechanisms that were considered, but where changes are not recommended at this time, can be found in the Part 2 report.

Solid Waste Collection Tax (SWCT)

RECOMMENDATIONS

Dedicate SWCT revenues to solid waste uses.

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

Background. The solid waste collection tax (RCW 82.18.020) is a 3.6% excise tax on collection charges for solid waste disposal. The SWCT is charged on garbage only; materials collected for recycling, composting, or salvage as well as hazardous or toxic wastes are not subject to the tax.

Revenue raised by this tax is not currently dedicated to solid waste; the SWCT revenues are deposited into the Public Works Assistance Account, which funds public infrastructure investments. However, in a 2005 analysis, only 10% of SWCT revenues were spent on solid waste-related infrastructure (analysis based on more recent data is not available). Further, from 2011 to 2015, the State Legislature redirected all revenues from the SWCT to the state's General Fund, and half of the SWCT revenues are currently redirected to the Education Legacy Trust Account through 2019.

From 1989 to 1995, an additional 1% "companion" solid waste collection tax was collected. The revenues were deposited into a solid waste management account dedicated to implementing the Waste Not Washington Act.[11]

Considerations:

- If all solid waste collection tax revenues were, in fact, dedicated to solid waste, this mechanism would offer several strengths:
  - A clear nexus to solid waste.
  - A degree of built-in inflation protection because the mechanism is built on collection charges (in dollars) rather than tons, although revenue will still fluctuate somewhat with disposal quantities and the economy.

- Respondents to the survey on potential mechanisms expressed concerns that expanding the solid waste collection tax to cover recycling and organic materials will create a disincentive for diversion programs. To address these concerns, if expanding the tax, consider differential rates that are lower than the rate charged for garbage disposal.
- Use of funds in the Public Works Assistance Account are restricted to infrastructure investments only. If dedicating a subaccount to solid waste funds within the Public Works Assistance Account, note that SWCT revenues will be limited to funding infrastructure only and cannot be used for other activities such as enforcement or public education.
- Other states charge a statewide tax based on tons of waste generated or disposed. Washington's SWCT is more financially sustainable because waste-handling revenues are not directly correlated with waste quantities.

Hazardous Substance Tax (HST) for Coordinated Prevention Grants (CPG)

RECOMMENDATIONS

Rededicate HST revenues to solid waste uses and support legislation under consideration to apply a surtax when HST collection falls below a specified threshold.

- Work to re-dedicate HST funding to waste-related purposes (e.g., CPG).
- Support the two bills (SB 5501 and HB 1663) that are currently under consideration in the Washington State Legislature. These bills aim to improve the HST's funding stability by imposing a temporary surcharge when HST collections fall below a specified amount. As proposed, these bills would impose a surtax of 0.14% through June 30, 2019, and a surtax of 0.03% after July 1, 2019. The tax would be suspended when HST revenues reach $160 million or more.
- Restore CPG to historic funding levels.

Background. The hazardous substance tax 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. RCW 82.21 covers the taxing authority and RCW 70.105D covers hazardous waste clean-up. Funds collected from this tax are deposited into the State Toxics Control Account, Local Toxics Control Account, and (in the case of excess amounts) the Environmental Legacy Stewardship Account. A portion of local toxics funds are passed through to local jurisdictions through Coordinated Prevention Grants (CPG), which can be used for solid and hazardous waste planning and implementation projects and solid waste enforcement. Historically, Washington jurisdictions—particularly smaller counties and cities—have relied on CPG funds for a significant portion of their local recycling, enforcement, and moderate risk waste programs.[12] CPG funds have been used to help local governments pay for new recycling containers, processing equipment such as balers and conveyers, and education programs. MTCA funds are also used for Public Participation Grants (PPGs), which fund waste management and contaminated site projects by citizen and nonprofit groups.

HST revenues have decreased from 2013 to 2017, resulting in cuts to allocated CPG funding. In 2013–2015, approximately 40% ($167 million) of the $393 million collected under the Hazardous Substance

Tax was deposited to the Local Toxics Control Account, which largely funds CPG.[13] Of that funding, $34 million (9% of the Hazardous Substance Tax revenue and 20% of its contribution to the Local Toxics Control Account) was budgeted to local government grants.[14] The amount budgeted to local governments through CPG has continued to decrease since 2013, and the 2017-2019 biennium appropriation for CPG is expected to be $10 million at the time of this writing.

Considerations:

- HST funding fluctuates substantially with the price and use of petroleum products, and recent decreases in the price of petroleum have created funding shortfalls. In the long term, a transition to clean energy could also reduce funding from this mechanism.
- As a substance- and product-based tax on more than 15,000 products, this funding source is relatively complex to implement because it requires identifying which businesses are using covered products.

Litter Tax

RECOMMENDATIONS

- Work to **re-dedicate funding** to solid waste, litter, and clean-up.
- **Update list of covered products** to make sure it reflects items that are littered. This may include:
  - Reviewing litter studies, conducing litter surveys, and obtaining input from litter collection crews to identify materials that are currently commonly littered and how they compare to products covered under the Litter Tax.
  - Considering trends in what new products are consumed that may generate litter, such as cigarettes/vaping/cannabis and products sold in multi-material packaging (e.g., juice boxes and aseptic containers).
  - Engaging stakeholders whose products may be added to the list of taxable products.

Background. The Litter Tax (RCW 82.19) is an excise tax of 0.015% on the value of products deemed likely to become litter. Examples of taxed products include food, 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.

Historically, the tax has funded the Litter Control Account, which supports state agency efforts to clean up litter, litter grants to local governments, and technical assistance in waste reduction and recycling. RCW 70.93 covers how litter tax funds may be used. Starting in 2009, funding redirections of the Litter Tax forced Ecology to suspend litter programs such as a prevention campaign and survey, litter hotline, and education on secured load requirements.[15] Washington collected over $20 million in Litter Tax revenue in 2013–2015. The Department of Ecology's Waste 2 Resources program received $9.1 million of those funds (45% of the collected revenue) for litter clean-up related activities and waste reduction and recycling work. The main funding redirection of $10 million per biennium to state park maintenance was scheduled to end in fiscal year 2017 (HB 1060); however, at the time of this writing, all draft budgets continue this redirection.[16]

Considerations:

- Respondents to the Part 3 survey identified benefits of the Litter Tax as being that it targets specific materials and that generators pay. Respondents also noted potential drawbacks such as a lack of local control over funding and its potential to increase product costs.
- Since 2009, San Francisco, California has charged a similar tax on cigarettes to fund litter clean-up.

Extended Producer Responsibility (EPR)

RECOMMENDATIONS

Expand statewide EPR programs for hard-to-recycle and hazardous products.

- Expand existing EPR programs:
  - Increase the range of electronics accepted by E-Cycle Washington, such as peripherals and printers.
  - Implement an EPR program for pharmaceuticals statewide (programs are currently underway at the county level in King, Kitsap, Pierce, and Snohomish counties).
- Seek to implement statewide EPR for hard-to-handle and hazardous products, such as paint, mattresses, batteries, appliances with refrigerants, and/or household hazardous waste.
- Monitor effectiveness and stakeholder impacts of packaging and printed-paper programs elsewhere for potential future consideration.

Background. Extended producer responsibility programs require manufacturers of covered products to fund the cost of collection and recycling and to manage the handling of recovered materials. EPR programs also typically include provisions for producers to promote the collection program and to provide education regarding proper handling of covered materials. EPR programs support recycling and proper disposal of covered products by residents and small businesses by making recycling free at end-of-life and reasonably convenient (as defined in authorizing legislation). 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. Manufacturer-run programs often contract with and pay private companies or local governments to provide collection and recycling. EPR programs typically include administrative fees paid by manufacturers to fund government oversight.

In Washington, EPR programs currently cover televisions and computers (E-Cycle Washington) and mercury-containing lights (LightRecycle) at the state level (RCW 70.95N for E-Cycle; RCW 70.275 for LightRecycle). Four counties in Washington (King, Kitsap, Pierce, and Snohomish) have passed EPR laws regarding pharmaceuticals.[17]

Considerations:

- By the second year of Oregon's PaintCare program (an EPR program for paint), 10 out of 15 recycling and HHW coordinators reported that their costs decreased and attributed the savings

to the program. Metro, the regional government in the greater Portland area, reported cost savings of over $1 million in the first program year.[18]

- Respondents to the survey on proposed funding mechanisms suggested paint, mattresses, household hazardous waste, and batteries for future EPR programs, in addition to pharmaceuticals and expanded electronics EPR.
- Survey respondents identified benefits of EPR as that it improves collection and disposal infrastructure, shifts the burden of materials management to manufacturers, and is a mechanism in which the generator pays. Drawbacks identified included the potential for increased product costs to customers.
- From the state and municipal perspective, EPR is a stable funding mechanism for managing collection, processing, and disposal because it typically requires manufacturers to fully fund these activities for managing their products and the funds are not easily redirected to non-waste uses by the state legislature. Because EPR programs may shift both costs and revenues with the waste system, passing new EPR laws typically involves extensive engagement of producers, retailers, and public and private waste-system stakeholders.
- Using an advanced recycling fee (ARF) can create funding instability even when used in an EPR program. For example, PaintCare in Oregon is an EPR program funded by a fee that functions like an ARF. Specifically, paint manufacturers and retailers add a set fee based on container size to the sale price of paint and remit those fees to PaintCare to cover costs. That is, the program first sets product-based fees, which then result in revenues that determine what level of services can be provided. In 2015 and 2016, PaintCare fees in Oregon were less than operating expenses, reducing the number of collection events and drop-off sites made available to residents, despite efforts to keep the program cost-effective.[19] In contrast, Oregon's E-Cycle program, an EPR program for electronics, first determines the revenue needed to provide adequate services and then divides that cost across manufacturers based on their market share, thus preventing the type of shortfall that the ARF-style paint program experienced.[20]

Local Mechanisms

While local funding mechanisms place the political burden of raising revenues on local governments, they have the benefits of retaining local control over how funds are allocated and protecting funding from redirections by the state legislature. At the same time, local mechanisms cannot take the place of state-level mechanisms to ensure a baseline of service delivery in jurisdictions experiencing economic hardship that limits their ability to raise revenues locally. This section describes options for local funding mechanisms for solid waste.

RECOMMENDATION

Expand the use of existing city and county funding mechanisms that may be underutilized. Ecology should consider offering training to cities, counties, and local boards of health on how to use existing, flexible options. Local governments should consider or reconsider whether these funding mechanisms could help meet their funding needs.

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

- **Cities** have the authority to provide collection directly or to establish waste contracts that include collection of all waste streams (RCW 35.21.120); service may include moderate risk waste collection, education and outreach, litter clean-up, or other desired services. Contracts can also include administrative and other fees or surcharges to support city provision of other waste system components, such as enforcement, planning, or post-closure landfill activities. Through these contracts, cities have broad flexibility in how they set collection rate structures both to be sustainable and to incentivize recycling, composting, and waste prevention.
- **Cities** also have the authority to establish and manage the solid waste system (RCW 35.21.152) and to adopt ordinances that mandate garbage, recycling, or composting collection (RCW 35.21.130).
- **Counties** have the authority to establish a solid waste disposal district with the power to charge excise taxes on residents and business as well as to charge disposal fees based on weight or volume accepted at a disposal site or transfer station (RCW 36.58.100-150). Disposal districts have broad flexibility in designing and setting excise taxes. Counties also have the authority to establish a solid waste collection district to mandate collection (RCW 36.58A). These mechanisms work best when cities and counties cooperate because counties cannot include incorporated cities in their collection or disposal districts without approval by those cities. Counties can contract for recycling and composting services (RCW 36.58.040) in unincorporated areas.
- **Counties** also have the authority to set minimum standards for collection and solid waste handling (RCW 70.95.090-092) in unincorporated areas for service providers regulated by the Washington Utilities and Transportation Commission (WUTC) or where incorporated cities have signed on to the county's solid waste management plan. Counties have limited ability to influence collection rate structures of regulated waste collection companies (RCW 81.77), which are proposed by private waste collection companies and approved by the WUTC.
- **Local boards of health** have the authority to establish and enforce regulations that protect public health and to establish fee schedules for services provided (RCW 70.05.060).

Each of these mechanisms is described in more detail in the sections that follow, along with any considerations and a brief case study from a jurisdiction where the mechanism is already in use.

Solid Waste Disposal Districts and Collection Districts

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. State legislation does not prescribe how the tax must be calculated. Disposal districts are also authorized to collect disposal fees based on weight or volume at

disposal sites or transfer station. Similarly, counties also have the authority to establish collection districts to mandate solid waste collection services, on which disposal districts can charge excise taxes.

Considerations:

- Disposal districts work best to fund overall county solid waste activities when cities and the county cooperate to form a district encompassing the entire county. Inter-local agreements with constituent cities can be used so all county residents and businesses—not just those in unincorporated areas—are subject to disposal district excise taxes.
- Collection districts should carefully consider exemptions to mandatory collection before allowing them. Too many exemptions can reduce the adequacy of associated disposal district funding mechanisms.

Case Study: Whatcom County Disposal District

Whatcom County has used disposal and collection districts to fund its solid waste system since 1990. The collection district mandates that residents and businesses subscribe to garbage collection, albeit it allows some exceptions. The disposal district then charges an excise tax on garbage collection. The Whatcom County Disposal District charges an excise tax of up to $8.50 per ton on garbage collected by the solid waste collector in the district. Whatcom County uses collected funds for overall solid waste management planning, education, and community outreach activities not funded by other sources (such as Coordinated Prevention Grants).

One key to success is that the county has inter-local agreements with constituent cities to be able to collect the excise tax in incorporated areas, because revenues fund county-wide solid waste services. Another consideration is that disposal districts should carefully consider exemptions to disposal or excise taxes before allowing them. For example, residents in Whatcom County who self-haul their waste are exempt from the excise tax despite receiving benefits from a number of district services, such as household hazardous waste collection, comprehensive planning, and recycling education and outreach.

Board of Health Fees

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 to 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.

Local boards of health could potentially also use this authority to collect fees for other services that protect, preserve, or improve public health, such as moderate risk waste programs and cleanup and enforcement of regulations related to litter and illegal dumping or other permitting and enforcement activities related to solid waste. The King County Board of Health has established fees on garbage collection service, transfer station use, and wastewater treatment to fund its moderate and household hazardous waste program. The Tacoma-Pierce County Health Department has established fees to provide oversight of secure medicine return EPR programs.[21]

Considerations

- Unlike taxes, which are intended to generate revenue for general purposes, fees must be collected for and directly connected to services provided. When establishing fees, jurisdictions should keep in mind three factors to determine legality that the Washington State Supreme Court described in Covell v. Seattle 1995:[22]
  - The primary purpose must be regulatory in nature.
  - The money collected must be used only for the authorized regulatory purpose.
  - There must be "a direct relationship between the fee charged and the service received by those who pay the fee or between the fee charged and the burden produced by the fee payer."

Case Study: King County Local Hazardous Waste Management Program (LHWMP) [23]

To comply with state requirements for local hazardous waste planning established in the 1980s (RCW 70.105.220), King County determined that a regional plan would be most appropriate. In 1990, the Local Hazardous Waste Management Program in King County was established with approval by a required supermajority of suburban cities, King County, and the City of Seattle. LHWMP established fees on garbage collection service, transfer station use, and wastewater treatment to provide services related to moderate risk waste (planning, collection, prevention, education, enforcement). The program cites engaging both internal and external stakeholders and having detailed performance and financial data as keys to its funding success.

Most recently in 2015, LHWMP in King County made a revenue-neutral adjustment to the fee on solid waste collection from commercial customers. LHWMP worked closely with ten solid waste billing entities in the county to develop a fee structure that allocated costs more fairly across customers but was not too complex for the billing entities to calculate and pay. For example, the fee structure currently considers the size but not collection frequency of solid waste containers. Different fees are charged for residential customers, commercial customers with containers sized 0.48 cubic yards or smaller, commercial customers with containers larger than 0.48 and smaller than 10 cubic yards, and commercial customers with containers larger than 10 cubic yards.

Solid Waste Management Planning Fees

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

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

Considerations

- As with most county funding mechanisms, counties can collect fees in only unincorporated areas unless constituent cities agree to participate.
- As with Board of Health Fees, these fees must be collected for and directly connected to services provided. When establishing fees, there must be "a direct relationship between the fee charged and the service received by those who pay the fee or between the fee charged and the burden produced by the fee payer" (Covell v. Seattle, 1995). The primary purpose of fees must be regulatory in nature, and collected fees must be used only for the authorized regulatory purpose.

Case Study: Franklin County[24]

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

Service-Level Standards and Mandatory Collection

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

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

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

Fees or Embedded Services in Collection Contracts

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

Instead of or in addition to contract fees, cities can also embed service requirements into their contracts, such as requirements to provide education and outreach to customers, collect moderate risk waste, and collect litter.

Counties are authorized to contract for recycling and composting service. Clark County has been doing so since 1992 and includes collector-provided education in its recycling and composting contract, requiring the collector to cooperate with the County's recycling coordinator.

Considerations:

- Contracting for collection services works best when multiple waste collection companies compete for the contract. If there is no competition because only one collection company is interested in the contract, then mandatory collection or a service-level standard requiring recycling service may be easier. For areas not service by a municipal or contracted collector, WUTC would provide oversight on rates. Contracting without competition would require the county to assess independently whether the proposed rates are fair, a task at which the WUTC is very experienced. Alternatively, a city can directly provide collection services and set its own rates.
- Embedding services in solid waste contracts requires municipal oversight to ensure the provided services meet the jurisdiction's expectations but can also create a reliable funding mechanism (collection fees) for these services.

Case Study: City of Bellevue and City of SeaTac

In the City of Bellevue's contract, the collector is required to pay a one-time procurement fee to cover the cost of proposal and contract management, an annual contract fee, a one-time fee to cover new education and outreach materials, plus an ongoing fee that may also cover activities beyond contract administration. The City of Bellevue also has embedded service requirements in its contract; the collector is required to provide education and outreach to customers as well as litter collection services.

In the City of SeaTac's contract, the collector is required to pay a one-time procurement fee, an annual contract fee, and an ongoing franchise fee that may also cover activities beyond contract administration. The contracted collector is also required to provide education and outreach to customers and to provide curbside collection of used motor oil that is properly packaged.

Recycling Revenue-Sharing Agreements

Recyclable and organic materials that are collected can be marketed and sold as recycled feedstock for production of new materials or soil amendments. Collectors (jurisdictions or private waste collection companies) of these materials can generate revenues from the sale of these commodities when market conditions are favorable.

Typically, certificated waste collection companies regulated by the WUTC are required to return recycling commodity revenues to recycling customers with a "commodity credit" line item on customer bills. As an alternative, Washington State also authorizes certificated waste collection companies to retain up to 50% of these revenues if they are spent on activities that promote and increase recycling and are approved by the appropriate local government authority.

Cities and counties that contract for recycling or composting collection can include provisions for revenue-sharing or commodity rebates in their contracts. Jurisdictions that receive commodity revenues through contracting have more flexibility in how they use the funds than WUTC-regulated collectors.

Considerations:

- Recycling revenues are an unstable source of funding due to volatile commodity prices from year to year, even in areas with ready access to recycling markets.
- King, Snohomish, and Pierce counties have benefited from revenue-sharing agreements with WUTC-regulated collection companies in their jurisdictions. In particular, revenue-sharing agreements can be used to fund special research and pilot studies to promote resident recycling education for which funding may not otherwise exist.
- WUTC-regulated collection companies cannot retain commodity revenues without a county-approved plan to use them; however, state law does not specify a maximum period for these plans, so revenue-sharing agreements could be created for longer periods, such as five years instead of two to provide more stability by conserving windfall funds from one year for use in a later year.

Case Study: Snohomish County

Snohomish County approved plans and developed agreements with its two certificated haulers to allow the haulers to use up to 50% of recycling revenues for special research and pilot studies that promote residential recycling. Projects funded by revenue-sharing agreements have included designing elementary school curricula on recycling and food-scrap collection, developing Spanish-language recycling campaigns aimed at increasing participation in multilingual areas of the county, improving online materials about collection services, conducting waste-free cooking demonstrations, and researching and implementing multifamily outreach best practices.

Sustainable Collection Rate and Tip Fee Structures

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

Sustainable rate structures balance economic and environmental concerns. Specific recommendations for rate structures will vary with specific jurisdictional needs, but elements of sustainable rate structures that local governments should consider include separating out fixed and variable costs, using variable costs to provide incentives, ensuring rates using embedded ("free") recycling will cover total costs even as customers reduce garbage service, and incorporating mechanisms to adjust rates (e.g., decoupling in the energy industry) as appropriate.

Considerations:

Key lessons learned on establishing sustainable collection fees, drawn from other utilities, include:

- **"Free" recycling is unsustainable.** Back when the recycling rate was lower and commodity rates were higher, "free" recycling was an affordable incentive. As the recycling rate increases and as per-capita waste disposal decreases in the future, these types of fee structures will not be sustainable.
- **Utilities must cover their fixed costs and variable costs, while still providing incentives for conservation.** Water utilities, for example, make these two types of costs (fixed costs for service and variable costs associated with amount of utility use) explicit in the bill:
  - They include base or service fees, like a water collection fee, to provide financial stability and sustainability. In a waste context, this would be a monthly account fee or a container fee (such as in commercial contracts)
  - To cover variable costs, other utilities list separate usage fees. These fees can also provide an incentive for environmental sustainability. In waste, this would be a weight- or volume-based fee.
- **There are several considerations about incentive fee structures to take into account:**
  - The resulting fees in such a system do not necessarily align directly with actual costs. To incentivize conservation, utilities sometimes increase usage fees above variable costs and decrease base fees below fixed costs. When a utility creates a rate structure like this, it makes assumptions about how many customers will, for example, choose each cart size to ensure that the utility receives enough revenue to cover overall costs. A rate structure that puts a strong incentive on conservation or waste reduction bears a risk that it might succeed too well—that is, that too many people will choose the smallest container size and recycle everything. This scenario would result in a shortfall of revenues.
  - Some regulated energy utilities use a technique called **decoupling** to build in a semi-automatic course correction for such a case of greater-than-expected conservation without having to go through a full rate change procedure. Decoupling raises rates if incentives result in more conservation than expected so the utility can remain solvent in the following year. Conversely, if the incentive does not work as planned and the utility receives extra revenues because no one conserved (or recycled, for a waste utility), it also automatically lowers rates the next year to prevent an unfair windfall.

Next Steps

Next steps for moving forward with recommendations include the following:

- **For state-level funding mechanisms**, Ecology should build out a preliminary package of options. Take the package of options on a "roadshow" to engage stakeholders face-to-face, gather and use feedback, and build support. Ecology can revise the funding package as needed based on stakeholder feedback, and move forward with potentially proposing legislative changes supported by stakeholders.
  - The package of options, based on Ecology's consideration of recommendations from this report, would provide an additional level of detail regarding proposed changes and how the associated funds would be spent. For example, options regarding the Solid Waste Collection Tax could include proposals for specific percentages or dollar amounts of the existing tax to be directed to solid waste, whether funds would remain in a dedicated account within the Public Works Assistance Account for solid waste infrastructure or be placed into an entirely separate solid waste account to be used more broadly, tax rates for additional material to be covered, and/or a proposed rate for a tax increase to be dedicated to solid waste.
  - The roadshow approach is similar to how Oregon Department of Environmental Quality (DEQ) was able to build support for recent statewide funding increases passed in Oregon (Senate Bill 245) in 2015, which raised disposal permit and tipping fees and applied fees to additional classes of facilities. Oregon DEQ held stakeholder meetings around the state that presented the details of the proposed fee increases and focused on the need for and benefits of the increase, including information on how the additional funds would be used.
- **For local-level funding mechanisms,** support trainings for local government partners on local funding options and sustainable rate structures.
  - These trainings could be conducted by Ecology or a partner organization.
- Overall, continue to monitor relevant solid waste funding mechanisms elsewhere (particularly British Columbia, Oregon, and California) for future consideration. Monitor the effectiveness, impact on stakeholders, and impact on the overall solid waste system of EPR programs for packaging and printed-paper.

Associated Study Documents

The following documents compile background and supporting research conducted during this study:

Part 1: Update Current Funding Mechanisms

- Main Report
- Appendix 1: Background Discussion
- Appendix 2: List of Current Funding Mechanisms
- Appendix 3: Stakeholder Survey #1 – Instrument and Comments (presented in a separate document)

Part 2. Identify Potential Funding Mechanisms

- Main Report
- Appendix 1: List of Funding Mechanisms in Database
- Appendix 2: Definitions of Funding Mechanisms Research Fields in Database
- Appendix 3: Database with Detailed Descriptions of Funding Mechanisms (presented in a separate Excel file)
- Appendix 4: Utility Cost Recovery Practices and Implications for Solid Waste Funding in Washington (presented in a separate document)

Part 3. Recommended Funding Mechanisms

- Main Report (this document)
- Appendix 1: Stakeholder Feedback on Proposed Options Survey #2 – Summary, Instrument, and Comments (presented in a separate document)

Endnotes

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